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The Mac Product Experts

Protect Your Mac

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PLUS 9 Antivirus
and Firewall Apps
Reviewed



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Macworld

COVER STORY

48 Protect Your Mac

Are you leaving your Mac vulnerable to viruses, intruders, and other dangers? OS X may be more secure than some *other* operating systems we could name, but it's not invulnerable. We'll show you what steps you can take today to protect your Mac—and your data—from potential disasters.

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Check out our favorite new stuff.



The End of Innocence

OK, I'll admit it: I don't run any antivirus software on my Mac. The last time one of my Macs was infected by a virus was in 1990, when a bug hit my college newspaper's offices. It was transmitted via the floppy disks we passed around so freely back then. Since then, nothing. To put it bluntly, I've become complacent. Does that make me a bad Mac user—or just a *regular* Mac user?

The past 15 years have been pretty good when it comes to Mac security. And the first few years of Mac OS X have been remarkably stable and secure. No wonder I've become nonchalant, as have many other Mac users. But several factors are conspiring to end that period of stability, and we must all recognize that none of us can afford to ignore Mac security anymore.

Dangerous Times

In February, a couple of pieces of malicious software targeting OS X appeared in the wild. This malware (they weren't really viruses) didn't work very well—you really had to go out of your way for them to do anything at all. But I doubt that the brief outbreak was an isolated incident. Apple's increased visibility of late will surely tempt more hackers to target the Mac.

What's worse, the defenses of Mac users (including me) are much lower than those of your run-of-the-mill Windows user. Windows users have been trained for years about the need for antivirus software, firewalls, and the like. Mac users have heard the same warnings—but those warnings haven't been as stern, because the situation simply hasn't been as dire.

The combination of the Mac's rising profile and a population of users who haven't had to worry about security matters before is dangerous enough. Now Apple's marketing may have made matters worse.

Waving the Red Flag

For years, Apple has been incredibly circumspect about touting the Mac's relative lack of threats from viruses, spyware, and other nasty stuff that plagues Windows. Some Mac fans have been frustrated by the company's silence: Why shouldn't Apple promote the Mac's virus-free advantage over PCs?

But Apple's decision to remain silent was a smart one. Bragging about OS X's security would have been as dangerous as waving a red flag in front of a bull. Malware authors could have taken it as a challenge, the result of which would have been an increase in malware on OS X. That would have been bad for Apple and *terrible* for most Mac users.

Then, in May, Apple began running a series of TV ads. They were funny and effectively pointed out the

clear differences between Macs and PCs. Unfortunately, they also actively promoted the fact that Macs are immune to thousands of existing Windows-based viruses. So now Apple's waving that red flag. Can an angry bull be far behind?

The Intel Petri Dish

When Apple announced that it was switching to Intel processors, some people worried that the Mac would become more vulnerable to cyberattacks. But Intel processors aren't the reason PCs get infested with viruses: Microsoft Windows gets infected, not the CPU. Once that confusion was cleared up, things settled down—for a while.

Then Boot Camp—the Apple software that lets you run Windows on a Mac—arrived. The program's *raison d'être* is also its biggest drawback. If you run Windows on a Mac, you open yourself to all the bad stuff that's been written to attack PCs. So Boot Camp users have *two* reasons to care about security: the growing possibility that OS X itself will be attacked, and the clear and present danger of running Windows XP on a Mac.

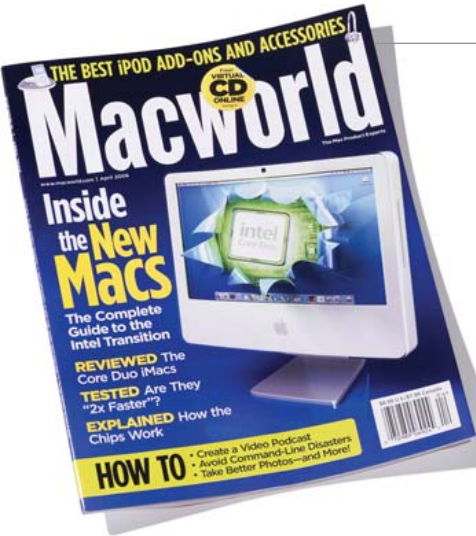
Don't Panic

Should you be scared? Absolutely not. But it's a good time for Mac users to start taking security seriously.

That's the goal of this issue's cover story ("Protect Your Mac," page 48). While there's no need to panic, there is a great need to inform yourself about the real threats—Trojan-horse programs on Web pages, scam artists in your e-mail inbox, or hackers half a world away trying to guess your password—and how you can keep them from doing you and your Mac any harm.

This heightened sense of security doesn't mean that the Mac's many advantages are going away—far from it. It's highly unlikely the Mac will *ever* be subject to the number of attacks that target Windows machines. But the age of innocence is over. □

Are you worried about security? Share your thoughts in our online forums at macworld.com/forums, or send me an e-mail at jason_snell@macworld.com.



FEEDBACK

The iMac Makeover

Apple's bombshell decision to start using Intel chips continues to reverberate all over the Mac world. In our March issue, we gave you our first take on the first Intel systems—the Intel iMac and the MacBook Pro. In April, we were able to give you more—full reviews of the first Intel iMacs, as well as the results of our extensive benchmark tests. All that coverage generated an equally extensive flood of reader e-mail messages and postings in our online forums. Here are just a few of them. □

Inside Knowledge

ALEX CHUNG

I read your story about the Core Duo iMacs and their performance with different apps (“Inside the Intel iMac,” April 2006), and I have a question. I currently have a 733MHz G4 Power Mac. Even with 1GB of RAM, it runs Adobe CS a little slowly. Knowing that Rosetta tends to slow down non-native apps, I was wondering how the new 2GHz Intel iMac, running Adobe CS in Rosetta but with a full 2GB of RAM, would compare with my computer in performance?

To quote from that article: “When we compared the new 2GHz iMac Core Duo to a 700MHz iMac G4 . . . we found that the Intel iMac executed our Rosetta application tests much faster than its four-year-old predecessor.” That said, we hope to continue testing different older systems with different memory configurations, to see how an Intel iMac running Rosetta will stack up against them.—Ed.

BRYAN HARRIS

In “Inside the Intel iMac,” you compared an iMac G5 with the new Intel iMacs, using a variety of tests. In some of the tests, such as importing a file into iPhoto 6 and creating a Zip archive in the Finder, hard-drive input/output is a major factor in the speed of the system. But Apple hasn't upgraded the drive I/O; it has changed the processor. You shouldn't test the hard drives and then claim the chip speed hasn't improved.

It's true that hard-drive I/O affects some test results. But as we state, we test overall system speed, not just the speed of the CPU.—Ed.

A.U. DAN DANIELS

A few months ago, my 15-inch iMac G4 started crashing daily. The diagnosis: some

kind of main-board problem. So I took the plunge and bought a 20-inch Intel Core Duo iMac. I bought it on a Saturday because I figured it would take the weekend to transfer all my stuff from the G4 and to get my printer, FireWire drives, AirPort Base Station, and Internet connection reconnected. It turns out that the whole process took an hour. I fired up the iMac and followed the directions to transfer everything from the G4 via FireWire, and it all just worked—all of my settings, all of my wife's settings, all the peripherals, the Internet connection, every single file, and every single program but one (SuperDuper). Rosetta is more than fine—even Microsoft Office runs perfectly well. Tell everyone to quit agonizing. Apple has pulled off another miracle.

Back in the iLife

ALEXANDER TRESSOR

For several years, I asked anyone I met who knew anything about Web design to create a Web site for my company. The results always proved—how can I put this delicately?—awful. So I bought the iLife '06 suite with iWeb (♦♦♦♦; April 2006). That was on Friday. By Monday I had my Web site up and running on .Mac. It really is that simple, even for a non-geek like me. iWeb is the greatest addition to iLife.

ART GORSKI

In your review of Pages 2 (♦♦♦♦; April 2006), you said that Pages offered only a limited set of spreadsheet functions. But the functions you listed are only those found on page 187 of the manual. If you flip forward to page 195, you'll see scads more formulas that you can use if you type them in. Maybe this program has a worthy spreadsheet feature after all?

We saw the additional functions; we just didn't list them all in our review. We still don't think those functions make Pages 2 a real spreadsheet program.—Ed.

Font Fiasco

RANDALL ELWOOD

Thanks for the ongoing tips on OS X maintenance (“The Ultimate Mac Tune-Up,” March 2006). I may have been a bit careless, though, when following the “Font Fixes” tips. I discovered that trying to resolve a duplicate of a system font (Geneva, in my case) could cause problems. After doing so on my G4, I found that I couldn't open Mail or Safari—and then the whole system crashed. I copied the font back into the /Library/Fonts folder and restarted, and I was back in business.

Why No Xserve?

BILL LEWINGTON

I see lots of articles in *Macworld* and on Macworld.com about Apple products, but never anything about the Xserve. How come? At my design company, Windows 2003 has pushed us over the edge, and we're thinking about migrating from the dreaded Microsoft servers to Xserve. We will probably wait for Intel in these Apple servers, but it would be nice to have a review or two to consider in the meantime.

CORRECTIONS

The picture accompanying the April 2006 issue's *Top Products* review of the Epson Stylus Photo R340 was of a Canon printer.

The mouse rating in the June 2006 issue's *Top Products* review of the Canon PowerShot G6 was incorrect. The correct mouse rating is ♦♦♦♦♦.

Although we occasionally do review Xserves, we tend to leave that to folks (like our friends at our sister publication InfoWorld) who specialize in servers and other enterprise-level technologies.—Ed.

Innumeracy

LYNDON LUHMANN

I read with interest your editorial in the April issue (“Feedback Loop,” *From the Editor’s Desk*). Jason Snell described the confusion some *Macworld* readers experienced when you said that one Mac was X percent faster than another. I guess some of *Macworld*’s readers need a remedial math course. Don’t they know that 200 percent is the same as “two times”? Please don’t dumb down *Macworld* for the people who slept through eighth-grade math.

Don’t Bring the Noise

GUY DALBEC

Regarding the “Noisy Power Macs” letter in the April 2006 issue’s *Feedback*: My son

was extremely disappointed when he found out how extremely noisy his new “whisper-quiet” iMac was. The noise becomes very annoying whenever even a slight demand is placed on the machine. He wanted to use the iMac primarily for music recording and editing with ProTools, but that’s impossible because of the incessant whine. *Macworld* would do its readers a service if it included a noise-level indicator in its reviews of new Macs and considered noise when calculating mouse ratings.

It’s an interesting idea, but it would be difficult to implement. We’re aware of complaints about noise in several Mac models. But they appear to be isolated cases. Within any given Mac product line, it appears that some specific machines might be noisy while others might not.—Ed.

Aw, Shucks

STEVE BRINER

I just finished reading my first *Macworld* editorial page, in your April edition (“Feedback Loop,” *From the Editor’s Desk*). You see, I am a new Mac user, having acquired a used PowerBook about two weeks ago. I

found your honesty refreshing and look forward to reading the rest of the issue. I believe anyone who has enough integrity to evaluate himself and the processes he uses will probably put out a first-class publication. I just thought I would encourage you from a first-time reader’s perspective.

JIM MCCAULEY

I do not agree with the reader who stated that “What’s Hot” is not funny (*Feedback*, April 2006). Not only do I find it very funny and insightful—it’s the first thing I turn to when I get your magazine. Don’t change a thing.

Post comments on our forums (www.macworld.com); send them by mail to

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Boot Camp FAQs

Everything You Need to Know about Running Windows XP on an Intel Mac

BY ROB GRIFFITHS AND JASON SNELL

Most of us feel pretty comfortable when it comes to our Macs, but Apple's release of Boot Camp has knocked many of us out of our comfort zone. What does it all mean? Can you really run Windows on a Mac? What's required to do so, and what are the potential pitfalls if you try?

Relax—we've put together a comprehensive list of questions and answers about Boot Camp, installing and running Windows on Mac hardware, and more (for specific how-to questions, see "Boot Camp Basic Training," *Geek Factor*, on page 78).

How does Boot Camp work?

Boot Camp is software that helps users of Intel-based Macs install and use Windows XP on those systems. The Boot Camp Assistant helps you change the set-up of your hard drive so that it has two partitions—your existing Mac volume and a new Windows-compatible volume. The Assistant also burns a CD-ROM that contains drivers—files that Windows needs so that it can operate your Mac's hardware efficiently. You can then install Windows on your Mac.



Wait—I thought all I had to do was install Boot Camp to run Windows on my Mac.

No, you need to have your own full, new, not-previously-registered version of Windows XP Service Pack 2 (SP2) Home or Pro, which will cost you \$150 to \$200.

How is Boot Camp different from the software hack that lets me install Windows XP?

You're referring to the two enterprising hackers who got Windows to install on Intel-based Macs a few weeks before Boot

Camp's release. However, installing that hack took quite a bit more effort than installing Boot Camp. You had to choose which operating system you wanted to use every time you rebooted; the hack didn't include any Windows drivers for Mac hardware, so Macs that used the hack to install Windows XP generally didn't work very well; you had to completely reformat (erase) your hard drive and start from scratch; and you needed to have a Windows PC to create a modified Windows installation disc. Boot Camp is better than that hack on all counts.

PHOTOGRAPH BY PETER BELANGER

Once I've installed Boot Camp, can I adjust the partitions to allocate more or less hard-drive space for either OS?

No. Once you've set the Windows partition size, you're stuck with it until you remove it entirely.

How difficult is it to undo a hard-drive partition if I don't like how Boot Camp works and want to go back to what I had before?

It's very simple; just boot into OS X, rerun Boot Camp, and click on the Restore The Startup Disk To A Single Volume button. The XP partition will be destroyed, and your hard drive will be returned to its original, one-partition configuration.

Will the Media Center Edition of Windows run on a Mac through Boot Camp?

Yes, though you'll have to use Nero's burning software on a PC to combine the two CDs into one bootable DVD for the Boot Camp installer to work with.

Will any Windows program run on a Mac if it's using Windows XP?

A Mac running Windows XP is actually just like any PC running XP. Assuming your hardware matches a Windows program's requirements, that program should run. In our tests, applications have worked just fine (for our test results, using *PC World's* WorldBench 5 tool, see "Put to the Test").

Are there any limitations for a Mac running Windows XP?

Windows XP can't use the built-in iSight camera on the MacBook, MacBook Pro, or iMac, nor can it use the MacBook Pro's keyboard backlighting. There's no support for the Apple USB Modem or Apple Remote. And not all keys are supported on Apple Bluetooth keyboards.

How does Windows perform on a Mac?

About as well as on comparable PCs, according to *PC World's* WorldBench 5 testing tool. Keep in mind that the processing technology used in the first round of Intel-based Macs is essentially a laptop technology. As a result, all of those systems perform in comparable fashion to PC laptops with similar specs. What we haven't seen yet from Apple is a high-performance desktop Mac with an Intel chip inside. And until we do, we won't really know how a desktop Mac running Windows would compare to its PC counterpart.

Well, I'm sold. What kind of software—utilities and so forth—am I going to need for my Windows-on-Mac experience?

Because there are so many Windows viruses out there, you'll definitely need an antivirus application. There are a lot to choose from, but since we Mac users aren't experts in PC virus software, check out *PC World's* latest roundup of anti-virus apps at macworld.com/1294.

Back up a second—viruses? Am I vulnerable to those if I run Windows XP on the Mac?

Absolutely. When you're running Windows, your Mac is no different from any other PC running Windows.

That doesn't mean my Mac OS is vulnerable to viruses, does it?

That's a complicated question. By default, Windows XP can't see Mac volumes. So if your Windows installation was infected by a virus that tried to delete files on your hard drives, it wouldn't even see your Mac files and they'd be safe. But if you install a program like Mediafour's MacDrive, which gives Windows XP the ability to see Mac volumes, your files could be vulnerable to a virus that deletes files. However, when you're running OS X—even on an Intel-based Mac—you're not susceptible to Windows-based viruses.

Since it'll be a while before Adobe's products run natively on Intel-based Macs, could I get better performance if I buy the Windows versions now and run them on a Mac, using XP?

Those programs will run at the full speed of the native Windows versions. So you may see better performance running them natively under Windows than using OS X's Rosetta translation technology. However, if you hope to run those applications natively in Mac OS, you may want to hold off; it's highly unlikely that

PUT TO THE TEST

System	Processor	WorldBench 5 Score	Multitasking	Windows Media Encoder 9	Roxio VideoWave	Adobe Photoshop 7.0.1	Microsoft Office 2002 SP-2
Apple Mac mini	1.66GHz Core Duo T2300	82	514	343	304	364	603
Apple 20-inch iMac	2GHz Core Duo T2500	96	423	294	267	320	541
Apple MacBook Pro (portable)	2.16GHz Core Duo T2600	98	419	280	259	305	535
Dell Inspiron E1705 (portable)	2GHz Core Duo T2500	97	498	305	271	325	549
HP Compaq nx9420 (portable)	2.16GHz Core Duo T2600	101	444	279	259	311	575
HP Pavilion a1250n Media Center Desktop PC	2GHz Athlon 64 X2 3800+	94	521	321	290	367	563
		>Better	<Better	<Better	<Better	<Better	<Better

BEST RESULTS IN BOLD.

All individual test results are in seconds. All systems had 1GB of RAM. Macs used Apple's Boot Camp beta to install Windows. All were tested with Windows XP Pro with Service Pack 2 except the HP Pavilion, which used Windows Media Center Edition. WorldBench 5 tests 15 applications in 13 test scenarios, including Excel spreadsheet operations; VCD and DVD image creation; WMA, WMV, and MP3 encoding; ZIP file compression; GIF and TIFF encoding; and DirectX and OpenGL fly-throughs and animations. The baseline desktop system, a PC with a 2.2GHz Athlon 64 FX-51 CPU with 1MB of Level 2 cache and 1GB of RAM, as well as an Nvidia GeForce FX 5950 Ultra graphics card with 256MB of RAM, is assigned a score of 100. For more information on WorldBench, visit macworld.com/1376.—MACWORLD LAB TESTING BY JAMES GALBRAITH AND JERRY JUNG

Adobe will provide a free crossgrade from the Windows versions of its apps to the Universal versions that will run under OS X.

I've already used my Microsoft Office registration number on my PC. Can I use that same number on my Mac?

Just as with Windows, Office includes a one-machine license, so you'll have to purchase additional copies if you want to install it on a Boot Camp Mac.

Now that Boot Camp is here, does this mean I won't need to run Virtual PC anymore?

Well, it's not as though Intel-based Mac owners can run Virtual PC now—the emulation software isn't currently compatible with any Intel Macs. But more to the point, Boot Camp is different from Virtual PC. Whereas the latter program lets you run Windows at the same time your Mac is booted into OS X, Boot Camp offers a one-or-the-other scenario: once you've rebooted into Windows, all traces of OS X disappear. You can't switch back and forth between Windows applications and Mac programs without rebooting.

While Virtual PC may not run on an Intel-based Mac, there are plenty of similar programs that do. They include Parallels' Workstation, Mike Kronenberg's Q, and OpenOSX's WinTel. However, they're all under various stages of development and have some serious quirks about them. The good news is that these programs tend to run Windows much faster than Virtual PC did, because they don't need to emulate the Intel processor that Windows uses.

Which is easier to use—Boot Camp or Parallels Workstation?

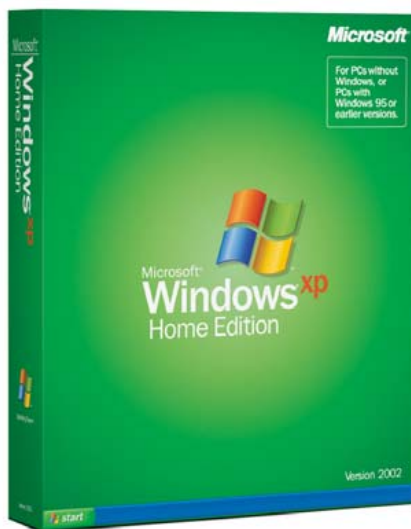
Boot Camp is somewhat easier to configure, though it requires more changes to your machine—partitioning the hard drive and possibly updating the firmware. Parallels is simply an application, so you can run it whenever you like. You have to do a bit of work to set up the app before you install Windows, however.

Parallels is slower than Boot Camp, since it runs Windows within OS X. However, it's not nearly as slow as Virtual PC used to be, and it's quite usable. It's hard to say which is easier, because they're

really different products. If you have a need for Windows software alongside your OS X software, Parallels is the best solution. But if you want full driver support, and full Windows speed, Boot Camp is the way to go.

Now that Windows XP can run on a Mac, how long before we see Dell and HP PCs booting into OS X?

Our rough estimate would be “never.” Apple has said repeatedly that OS X will run only on Apple hardware, and we don't expect that to change. Apple makes a lot of money from Mac hardware, and with the announcement of



Boot Camp, Apple's hardware is now unique in that it runs both OS X and Windows. One of the reasons Apple's products are so good is that the company controls both the hardware and the software; allowing OS X to run on a generic Dell PC would not only gut Apple's hardware business, but could also potentially reduce the quality of the OS X user experience.

Will developers stop making Mac software now?

It's unlikely. Fundamentally, Mac users are Mac users because they want to use Mac OS. And developers realize that if Mac users wanted to run Windows apps, they wouldn't be Mac users. Some developers who simply don't understand the Mac might try to steer their users toward Windows, but chances are good

that most of those developers abandoned the Mac long ago, in the dark days of the late 1990s or during the OS X transition.

If there's any single area where we might see a serious change in the amount of Mac software being released, it's for games that appeal to hard-core gamers. Since many games operate with their own interface taking up the entire screen, there's very little difference between running those games when booted into OS X or booted into Windows XP. Hard-core Mac gamers will likely invest in a copy of Windows just so they can run the latest and greatest PC games, and therefore those games might not ever make it to OS X. However, games played by more casual Mac gamers—those who might not buy a \$200 copy of Windows just to play a puzzle or arcade-style game—will likely continue to be developed for the Mac market.

Will Boot Camp be part of OS X in the future?

Yes, Apple has confirmed that Boot Camp will be part of OS X 10.5, or Leopard—the next major upgrade to OS X. Apple plans to preview this future OS X version at the company's annual Worldwide Developers Conference in August.

Does that mean Microsoft will stop making Virtual PC?

Microsoft says that it is “continuing to work with Apple on a possible next version of Virtual PC.” What this means is anyone's guess, so here's ours: We figure that either Microsoft will release a new version of Virtual PC to run on Intel-based Macs, or Apple will integrate Virtual PC's features into Leopard. One of those two outcomes will almost certainly happen.

What about Windows Vista? Will it be able to run on a Mac?

Enterprising users have already gotten Vista to run on Mac hardware. And we would assume that when Vista is officially released, Boot Camp will be updated to allow Vista to run on Mac hardware. □

JASON SNELL is *Macworld's* editorial director. ROB GRIFFITHS is a *Macworld* senior editor and the founder of the Mac OS X Hints Web site. CHRISTOPHER BREEN, JIM DALRYMPLE, and PHILIP MICHAELS contributed to this story.

APPLE RELEASES SECOND PRO INTEL LAPTOP MODEL

17-Inch MacBook Pro

For Mac users who require the most out of portables, it should come as welcome news that Apple has expanded its Intel-based MacBook Pro line to include a 17-inch version. The 17-inch MacBook Pro features a 667MHz frontside bus and a 2.16GHz Intel Core Duo processor—the fastest Intel processor available in an Apple machine.

The 17-inch MacBook Pro has the same 1,680-by-1,050-pixel resolution as the 17-inch PowerBook G4 model it replaces, but it features a display that's 36 percent brighter—brighter, in fact, than both the 20- and 23-inch Apple Cinema Displays. It comes with ATI's Mobility Radeon X1600 graphics chip with 256MB of dedicated GDDR3 graphics memory. The laptop also includes an illuminated keyboard with an ambient light sensor.

Like the 15-inch MacBook Pro models (which, at press time, Apple had just bumped up to 2GHz from 1.83GHz and to 2.16GHz from 2GHz), the 17-inch model features a built-in iSight video camera and Apple's MagSafe power adapter, which disconnects from the notebook when there is strain on the power cord. It also includes Apple's Sudden Motion Sensor, which protects the hard drive in case the laptop is dropped. The 17-inch MacBook Pro weighs 6.8 pounds and is one inch tall when the screen is closed.

And similar to the 15-inch model, the 17-inch MacBook Pro includes a scrolling trackpad, one FireWire 400 port, analog and digital audio input and output, Gigabit Ethernet, an ExpressCard/34 expansion slot, a dual-link Digital Visual Interface (DVI) port for connecting to an



external monitor (including Apple's 30-inch Cinema HD Display), and built-in Bluetooth 2.0+EDR (Enhanced Data Rate) and AirPort Extreme wireless networking.

Unlike the 15-inch MacBook Pro, however, this model includes an 8× dual-layer SuperDrive (instead of a 4× single-layer SuperDrive), three USB 2.0 ports (instead of two), and a fast FireWire 800 port.

The \$2,799 laptop also comes with 1GB of 667MHz DDR2 SDRAM (expandable to 2GB), and a 5,400-rpm, 120GB Serial ATA (SATA) hard drive.

The new MacBook Pro made its debut during April's National Association of Broadcasters (NAB) trade show in Las Vegas—a perfect place to introduce a Mac laptop so tempting to creative professionals who shoot, edit, and produce digital imagery for a living. Although most users may find performance improvements over the PowerBook G4 to be more modest than Apple's claim of up to five times faster, one demo showed it playing four high-quality HD video streams simultaneously in Final Cut Pro—a feat a G4-based PowerBook couldn't come close to achieving.—PETER COHEN AND JIM DALRYMPLE

NEWS IN BRIEF



iTunes Keeps 99-Cent Song Pricing

Although executives at some of the large music publishers have expressed their dissatisfaction with iTunes' pricing structure in recent months—and have suggested that consumers would be willing to pay more for high-demand music—*The Financial Times* reports that Apple has secured contracts with EMI, Sony BMG, Universal, and Warner Music to keep prices the same. The story quotes an unnamed record executive as saying, "the labels need Apple too much right now" to make a stand.



Apple Hosts Annual Shareholders Meeting

During April's meeting at Apple's campus in Cupertino, California, Steve Jobs told shareholders that, "The new products in the [Apple] pipeline are the best I've ever seen in my life." He also admitted that the Mac's transition to Intel-based processors is probably costing the company some hardware sales as customers wait for new models to hit the market. But he expressed confidence that the strategy will pay off for the company in the long run. "Intel has a great road map," Jobs said. "This new [Intel Core Duo] chip is phenomenal—it blows away anything other suppliers have, including our former suppliers."



Aperture Goes Universal

In mid-April, Apple released Aperture 1.1, an update to the company's postproduction tool for photographers. In addition to adding Intel support, Apple made several other changes to improve the application's functionality and make it easier for new users to manage. The downloadable update is available now—for new customers, the cost of Aperture has gone down from \$499 to \$299. And in an unusual move for Apple, people who purchased Aperture at the earlier, higher price can download an electronic coupon and mail it in by June 30, 2006, for a \$200 credit from the Apple Online Store (www.apple.com/promo/aperture/).

CHECK IT OUT: WEB SITE

If you don't watch much TV—or, like many of us with TiVo-enhanced lifestyles, don't watch TV commercials—you may have missed Apple's latest crop of ads. The six spots of Apple's "Get a Mac" campaign feature *The Daily Show*'s John Hodgeman as a nerdy PC and Justin Long, from *Dodgeball* and *Galaxy Quest*, as a hip Mac. Luckily, Apple has all the ads on its site, so you don't have to miss this opportunity to feel even better about being a Mac user (macworld.com/1353).—JONATHAN SEFF



APPLE COMPUTER PREVAILS IN U.K. LAWSUIT

Beatles Lose Case

Back in 1991, Apple Computer and Apple Corps, the Beatles' business affairs company, inked an agreement regarding Apple Computer's use of the Apple logo in association with music-related products. But recently, the British company—still owned by former Beatles Paul McCartney and Ringo Starr, along with Yoko Ono, John Lennon's widow, and the estate of George Harrison—sued Apple Computer, seeking an injunction to prevent Apple Computer from using the apple logo in connection with its iPod and iTunes products, including the iTunes Music Store.

In early May, British high court judge Edward Mann ruled in favor of Apple Computer, deciding that the association between the logo use and the download service is a "proper one," and that the logo was clearly used in relation to the service, not the music.

Apple Computer defended its use of the logo in association with its music products as simply data transmission, which the agreement allows. The judge agreed with the defense, and said that Apple Computer's use of the logo in association with its products "does not go beyond what is reasonable and fair."

Apple Computer is demanding legal fees from Apple Corps, but Apple Corps plans to appeal the decision. Shortly after the verdict, Apple Computer CEO Steve Jobs invited the Beatles—who confirmed last month that work was being done to remaster the Beatles collection in preparation for digital downloads—to join the iTunes Music Store.

"We have always loved the Beatles, and hopefully we can now work together to get them on the iTunes Music Store," Steve Jobs said in a statement.—MACWORLD
UK STAFF



MULTIMEDIA BEAT

Avid Xpress Pro 5.5, from Avid Technology (www.avid.com): Digital video-editing software adds support for HD and 10-bit uncompressed SD and native DV50 formats (\$1,695).

Digital Performer 5, from MOTU (www.motu.com): PowerPC-native audio app adds six instrument plug-ins, track folders, a Meter Bridge feature, and new audio-editing tools (\$795; upgrade, \$195).

EyeTV 250, from Elgato Systems (www.elgato.com): Mac-compatible DVR features on-board hardware encoding that can convert analog TV signals into MPEG-1 or MPEG-2 video (\$199).

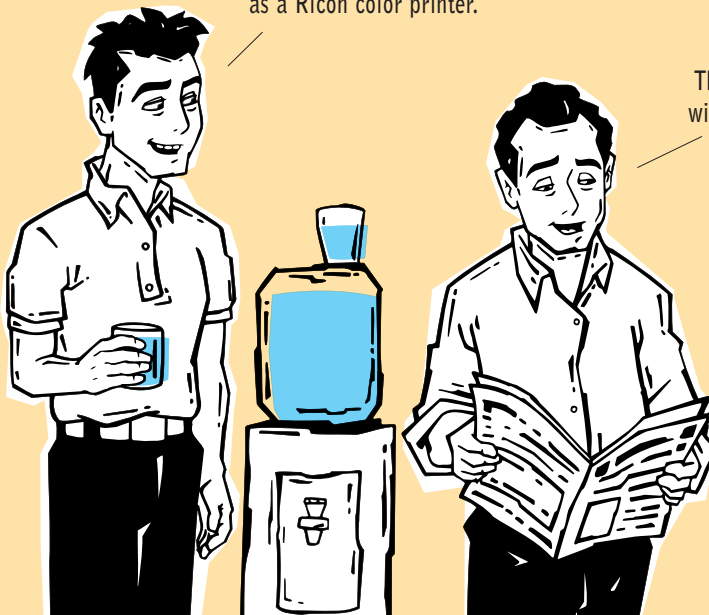
Live 5.2, from Ableton (www.ableton.com): Update to music-production suite adds support for Intel-based Macs (\$499; upgrade, free for users who purchased Live 5.0 after January 10, 2006, \$49 for others).

Media Composer, from Avid Technology (www.avid.com): Editing system connects directly to Avid's Interplay asset-management system and includes formal support for DVCPRO HD, HDV, and Avid DNxHD (\$4,995).

Popcorn 2, from Roxio (www.roxio.com): Updated version of DVD-duplication app adds the ability to convert video files to play on portable players, including the video iPod (\$50; upgrade, \$30).

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NEW LAPTOP REPLACES THE iBOOK AND THE 12-INCH POWERBOOK

Apple Releases the MacBook

Good-bye iBook, hello MacBook.

When Apple introduced the MacBook Pro, the first Intel-based Mac laptop, the Mac community figured that the moniker *MacBook Pro* left room for a similarly titled, consumer-level laptop. And with the MacBook—Apple's replacement for both the iBook and the 12-inch PowerBook—that consumer-level laptop has arrived. (See "Laptop Lane" for a comparison.)

Featuring an Intel Core Duo processor as fast as 2GHz, Apple says that the MacBook is up to five times faster than the iBook it replaces and four times faster than the 12-inch PowerBook (for our MacBook test results, go to macworld.com/1391).

The new MacBook is available in three configurations, and prices range from \$1,099 to \$1,499. Apple is offering a 1.83GHz and 2GHz



MacBook in a newly designed white enclosure, and a 2GHz MacBook in a new matte black case.

Apple says the MacBook's 13-inch glossy wide-screen display, which is more reflective than

previous displays, is 79 percent brighter than both the iBook and the 12-inch PowerBook. At a resolution of 1,280 by 800 pixels, the MacBook display provides 30 percent more viewing area than the models it replaces.

This is the first time Apple has used glossy displays, which have long been available in other notebooks. Philip Schiller, Apple's senior vice president of worldwide product marketing, explains, "It is only now that the quality is at a level that we are happy to put in our products." He says that previously, glossy screens caused unacceptable color changes. (MacBook Pro purchasers can also now choose a glossy display as a free option.)

The release of the MacBook shows a slightly different portable strategy for Apple. The PowerBook and iBook products had very clear lines that

PHOTOGRAPH BY PETER BELANGER

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STORAGE BEAT

Flash Drive Max, from Kanguru (www.kanguru.com): Line of USB 2.0 flash drives comes in capacities ranging from 16GB to 64GB (\$800 to \$2,800).

mini SATADock, from WiebeTech (www.wiebe-tech.com): Device connects a bare Serial ATA drive to a Mac equipped with a SATA interface card (\$75).

OWC Mercury Elite-AL, from Other World Computing (www.macsales.com): Triple-interface external hard drive features Seagate's new 750GB Barracuda 7200.10 drive mechanism (\$600).

PX-SP hard drives, from Plextor (www.plextor.com): Portable hard drives have a USB 2.0 port and come in 80GB and 120GB capacities (80GB, \$169; 120GB, \$260).

SeriTek/2SM2-E, from FirmTek (www.firmtek.com): Serial ATA ExpressCard host adapter lets MacBook Pro laptops work with external SATA disk drives (\$120).

Vmirror, from Vicom Systems (www.vicom.com): Family of data protection appliances is designed to work with Xserve RAID and mirror data from any number of Mac-based hosts to the RAID storage system (\$8,950 to \$14,500, depending on model).

LAPTOP LANE

	MACBOOK	iBOOK	12-INCH POWERBOOK
Price	\$1,099; \$1,299; \$1,499	\$999; \$1,299	\$1,499; \$1,699
Processor	1.83GHz or 2GHz Intel Core Duo	1.33GHz or 1.42GHz PowerPC G4	1.5GHz PowerPC G4
Memory/Maximum	512MB DDR2 SDRAM (667MHz)/2GB	512MB DDR SDRAM (333MHz)/1.5GB	512MB DDR SDRAM (333MHz)/1.25GB
Hard drive (standard)	60GB or 80GB 5,400-rpm Serial ATA	40GB 4,200-rpm ATA/100	80GB 5,400-rpm Ultra ATA/100
Optical drive	Combo drive or 4× SuperDrive	Combo drive or 8× SuperDrive	8× SuperDrive
Display	13.3 inches (glossy wide screen)	12.1 or 14.1 inches	12.1 inches
Graphics	Intel GMA 950, 64MB DDR2 SDRAM (shared with main memory)	ATI Mobility Radeon 9550, 32MB DDR SDRAM (dedicated)	Nvidia GeForce FX Go5200, 64MB DDR SDRAM (dedicated)
Dimensions (h × w × d, in inches)	1.1 × 12.8 × 8.9	1.4 × 11.2 × 9.1; 1.4 × 12.7 × 10.2	1.2 × 10.9 × 8.6
Weight	5.2 pounds	4.9 pounds; 5.9 pounds	4.6 pounds

separated the notebooks in features and size. The new MacBook and MacBook Pro share many more features and feel like one product line.

The MacBook includes a built-in iSight video camera, Apple's MagSafe power adapter, Apple's Front Row software with the Apple Remote, DVI output with support for two displays (for monitors

up to 23 inches), analog and digital audio inputs and outputs, Gigabit Ethernet, a Sudden Motion Sensor, and a scrolling trackpad. The MacBook also includes built-in AirPort Extreme wireless networking, Bluetooth 2.0+EDR, two USB 2.0 ports, one FireWire 400 port, and either a slot-loading Combo drive or a slot-loading SuperDrive.—JIM DALRYMPLE

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APPLE MARKET SHARE COULD DOUBLE DUE TO WINDOWS DEFECTORS

Microsoft's Poor Image

While much attention is currently focused on the Mac's newfound ability to run Windows (see "Boot Camp FAQs," page 14), a report by market analysis firm Forrester Research says that consumers are so distrustful of Microsoft that Apple could double its market share due to users defecting from Windows.

The remarks come in a report that looks at brand identity and its importance. The report also studies the effect a company's brand has on product pricing and the demographics of purchasers.

Overall, only Apple and TiVo saw the level of trust in their brand rise

in the last two years, according to the report. The final tally saw Bose, Dell, Hewlett-Packard, Panasonic, and Sony earn the highest marks, while Microsoft, Gateway, and LG ranked at the bottom.

The low scores for Microsoft could mean good news for Apple, as it shows consumer distrust of the software giant.

"Microsoft faces big consumer defection risk: one measure of consumers' dissatisfaction with Microsoft is seen in the 5.4 million households that gave it a brand trust of 1 (distrust a lot) or 2 (distrust a bit)," the report says. These households know they run Microsoft software but

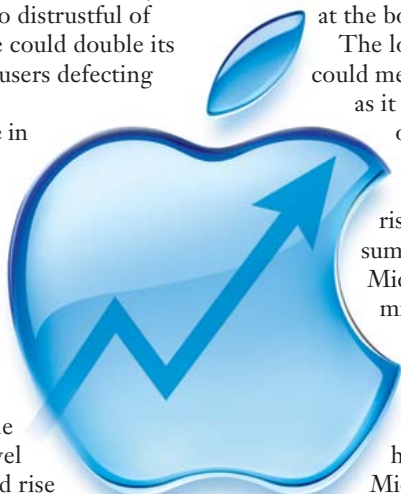
would be just as happy to leave it behind—if they could.

The demographic of Microsoft's at-risk customers fits well with Apple's user base, which Forrester describes as "affluent, optimistic about technology, and brand aware."

The study was also done before Apple gave users of its Intel-based Macs the ability to run Windows.

Apple has been trying to reach entry-level customers with products like the Mac mini, but the report says it needs to continue to reach out to consumers.

"Those who plan to use Apple in the future have, on average, a third less income and bigger families," the report says. "To reach these 7 million U.S. households, Apple must continually remind them that its pricing is competitive and its products are accessible to everyone."—JIM DALRYMPLE



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VoIP Applications

Is Internet Phone Service Right for You?

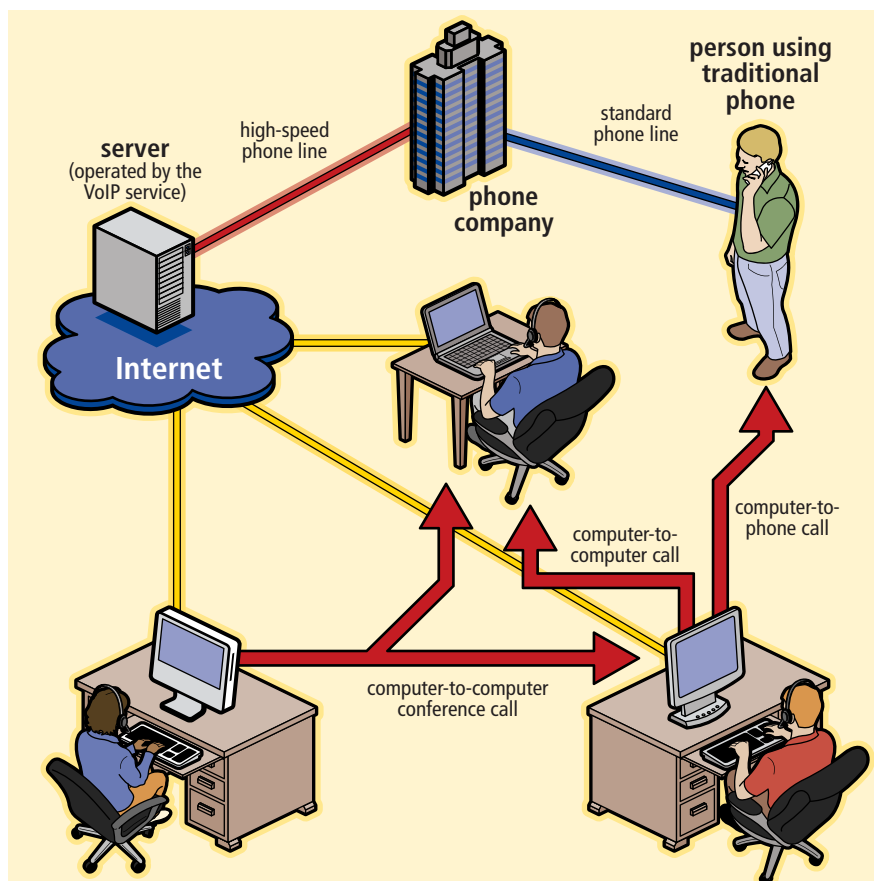
BY TED WALLINGFORD

Voice over IP, or VoIP, is an emerging technology that allows you to use your broadband Internet connection to place and receive voice and videophone calls. Internet-based calls are less expensive than traditional calls (sometimes they're even free), and many VoIP-based communication services are compatible with the old-fashioned global phone network, so you can use these new VoIP tools to place calls to and receive them from traditional phone numbers. By adding some desktop VoIP software tools to your Mac, you, too, can take advantage of Internet calling.

We've reviewed four Mac-compatible desktop VoIP applications: Apple's iChat AV 3.1.4, SIPPhone's Gizmo Project 1.3.2, SightSpeed 4.5, and Skype 1.4. We also checked out a unique product called Wengo-Phone; still in beta for the Mac, this VoIP plug-in for Mozilla Firefox lets you make and receive calls via the browser.

While each program has strengths and weaknesses, they all do basically the same thing: they present you with a buddy list like the one in an instant-messaging (IM) program, and they allow you to communicate by voice (and sometimes video) with the folks in that list. Perhaps the best thing about these VoIP apps is that they're free downloads and aren't shareware, so they won't time out or periodically nag you to register. Since these programs are free, their makers do charge for some premium features.

To get started using VoIP, you'll need a broadband Internet connection (cable or DSL) and a Mac running OS X 10.3 or 10.4 (some of these tools—iChat AV and Skype, for instance—offer additional functions to Tiger users). You'll also need a microphone and a pair of speakers or headphones. Serious desktop VoIP users will opt for headphones or even a headset-microphone to eliminate echo, one of the negative side effects of using freestanding speakers.



From Your Desktop Desktop Voice over IP software allows you to interact with other VoIP users, and some VoIP tools even let you call traditional phone numbers from the comfort of your Mac desktop.

Cross-Platform Connections

Some VoIP products, including Skype and Gizmo Project, run on Windows and Linux, while Apple's iChat AV runs only on OS X.

Skype, SightSpeed, Gizmo Project, and iChat AV allow you to host either multi-party voice or videoconference calls. Unlike expensive high-end conferencing systems designed for large businesses, which are often connected to a telephone system,

these simple desktop VoIP apps can make conferencing easier—and more affordable. All of these applications allow you to call other Internet users for free. But if you want to call somebody using his or her telephone number, as permitted by Skype, Gizmo Project, and the Wengo plug-in, you'll pay a basic, per-minute fee. At this writing, neither iChat AV nor SightSpeed permits computer-to-phone calling.

ILLUSTRATION BY COLIN HAYES

REVIEWS YOU CAN TRUST Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.

Advanced Features Cost Money

While you can make basic calls for free, more-advanced features will cost you. For instance, Skype's voice-mail feature carries a small monthly charge. Obtaining a permanent phone number from Skype (called a SkypeIn number) involves an additional fee. Also for a fee, Gizmo Project allows you to forward your incoming calls to another telephone, such as your cell phone, and SightSpeed offers extended conferencing and video-messaging features for paid subscribers. iChat AV users can't call traditional phone numbers, but they can call each other, using securely encrypted audio

channels on the Internet if all participants are .Mac subscribers.

Once you become accustomed to a desktop VoIP tool, you may find that VoIP calling becomes a part of your daily routine. After all, it's a lot easier to dial a Skype buddy by double-clicking on a name than it is to look up a number in Address Book and manually punch it in on your telephone's keypad. If you're into multiplayer Internet games, using a tool like Skype to keep in touch with your teammates is nice, as it relieves you from having to type text-chat messages during the game. And if you have relatives in other countries, talking to them over the

Internet will cost you a lot less than placing international long-distance calls.

Some Downsides

Despite the benefits of VoIP software on the Mac, a traditional phone is still necessary in some situations. Chief among them is emergency calling. None of the apps we looked at can properly route a 911 call to your local emergency dispatcher, though they'll probably have this ability in the future. Some services that require entering digits—such as telephone banking or certain corporate phone menus—may not work properly with

continues

VoIP SOFTWARE COMPARED

PROD- UCT	COMPANY	RATING	SYSTEM REQUIRE- MENTS	VIDEO CONFER- ENCING	ENCRYPT- ED AUDIO	COM- PUTER- TO- PHONE CALLING	SUPPORTS CALLS TO WINDOWS USERS	PRICING METHOD FOR PAY FEATURES	WEBCAM SUPPORT	PERMITS CALLS TO OTHER VOIP SERVICES	VOICE QUALITY	PROS	CONS
Gizmo Project 1.3.2	SIPPhone, www.gizmo-project.com	★★★★	OS X 10.3 (Panther) or 10.4 (Tiger); Universal	○	●	●	●	prepaid credits	N/A	●	Good	Can record calls; can customize hold music; party-line chat; can dial SIP URIs; simultaneous ring options; computer-to-phone calling.	No videoconferencing; inferior implementation of computer-to-phone conference calling.
iChat AV 3.1.4	Apple Computer, www.apple.com	★★★★	10.4 (Tiger); Universal	●	.Mac users only	○	●	.Mac, \$99 per year	FireWire only	○	Good	Simple, easy user interface; compatible with Mac and Windows AIM and Google Talk; no centralized service necessary for conference calls.	No support for computer-to-phone calling; no built-in support for USB video cameras.
Sight-Speed 4.5	Sight-Speed, www.sight-speed.com	★★★★	OS X 10.3 (Panther) or 10.4 (Tiger); Universal	●	○	○	●	fixed monthly fee	USB and FireWire	○	Good	Cool pan-tilt-zoom camera features; useful parental controls; nifty video mail; works with Windows and Mac.	Un-Mac-like interface; limits on video mail are unrealistic for video blogging; can use only a Webcam snapshot for thumbnail image; no computer-to-phone calling.
Skype 1.4 TOP Product	Skype, www.skype.com	★★★★	OS X 10.3 (Panther) or 10.4 (Tiger); PowerPC	○	●	●	●	prepaid credits	N/A	○	Excellent	Excellent sound quality; computer-to-phone calling ability; convenient call history; searchable user directory; ability to sync with Apple's Address Book.	No videoconferencing support for Mac version.

N/A = not applicable. ● = yes. ○ = no.

the computer-to-phone features of Skype and Gizmo Project, due to differences in the way VoIP supports dialed touch tones.

Discovering which VoIP app is right for you involves a combination of research, experimentation, and (hopefully) a little fun.

iChat AV 3.1

Most Mac OS X users already have a great VoIP tool installed. Apple's iChat AV comes with every Mac and, as of the current version (3.1.4), offers good voice-chatting and videoconferencing features. This program began life as a simple text-messaging tool for use with the AOL Instant Messenger (AIM) network, but it has evolved into a full-blown desktop teleconferencing tool. When used alongside Apple's excellent iSight video camera (now built into new iMacs, MacBooks,

and MacBook Pros), iChat provides the richest videoconferencing experience available on an OS X machine.

iChat also supports Jabber, an open-source IM protocol, so you can use iChat with Google Talk (a Windows-only IM program). And Bonjour, Apple's zero-configuration networking technology, enables iChat to seamlessly discover potential partners connected to your LAN. iChat also works with Apple's iChat Server, so you can maintain your own private network of iChat users. This is ideal in an office setting where you don't want private communication traversing the public Internet.

iChat's user interface resembles that of an IM application. Like Skype and other IM apps, iChat has a buddy list that tells you the current status of each of your buddies, so

you know if it's a good time to call or text-message them. iChat also offers something unique among these VoIP tools: icons accompanying each buddy in the list tell you whether he or she has the right hardware—in this case, a camera and a microphone—to accept video or voice calls.

In addition to offering one-on-one calling, iChat supports multiparty cross-platform conferencing for voice and video. Voice conferences can include up to ten participants. While iChat is limited to four video participants at a time, it's hard to beat iChat's cool 3-D video display, which makes it appear that the people in the conference are actually facing one another. Apple's adoption of the H.264 video codec means that you'll see very clear, high-quality

continues

Internet Telephony and VoIP—What's the Difference?

If you want to dive into the world of Internet telephony but prefer to use your existing phone—not VoIP software on your Mac—as your primary calling device, you might consider subscribing to an Internet telephony service provider (ITSP). An ITSP uses your broadband Internet connection to deliver telephone service to your home or office, usually at a steeply discounted rate. Unlike desktop VoIP tools, ITSPs don't require that you use your computer to place and receive calls.

It works like this: when you subscribe to an ITSP such as Packet8, Vonage, or BroadVoice, you receive an analog telephone adapter (ATA), either through the mail or with the service bundle purchased at an electronics retailer. This ATA connects to your broadband router and your telephone, acting as a go-between and performing the signal translation that allows your analog telephone to communicate with the ITSP through your broadband connection.

The ITSP assigns you a phone number (or completes the transfer of your existing number, if you prefer). Other people can call you at this number, whether they're dialing via an ITSP or a traditional phone company, and it doesn't have to have a local area code. In fact, there's no reason why somebody who has recently moved from New York to San Diego can't order a New York number to make it cheap for friends back east to keep in touch.

When you pick up your new Internet-connected phone, you'll hear a standard dial tone. You dial phone numbers the same old way, and your phone will ring as usual when you receive a call. A few ITSPs let you transform your Mac or PC into a phone that can place and receive calls using the ITSP account, through a piece of software called a *soft phone*. Using a soft phone and your MacBook Pro, for example, you can tote your home phone line in your briefcase wherever you go. As soon as you connect your computer to the Internet—at a hotel, in the airport, at a relative's house—you can place and receive calls as if you were sitting in your own living room.

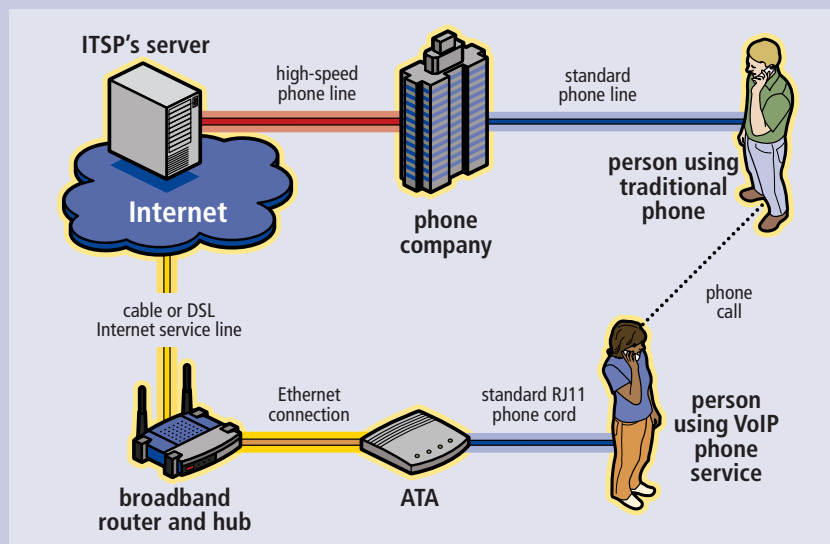
Though it's easy to confuse soft phones with desktop VoIP tools such as Skype, the latter are not soft phones, and you can't use them with your ITSP service. If soft-phone calling appeals to you, ask your prospective ITSP whether it supports a Mac-compatible soft phone such as CounterPath's X-Pro (www.xten.com) or SJ Labs' SJphone (www.sjllabs.com). However, you can use Internet telephony products such as Phlink 3.0 (🔗; macworld.com/1343) and PhoneVail Message Center 4.0 (🔗; macworld.com/1344).

ITSP call quality is comparable to that of a traditional land line or cell phone. Of course, when your phone shares the Internet connection with your Mac and other devices on a LAN (local area network), it is subject to the same traffic jams and slowdowns that occur with other Web applications—except that poor Internet performance has

a devastating effect on Internet telephony. A service slowdown at your ISP could make your phone calls sound bad or even disconnect.

Thankfully, most broadband connections can carry a few Internet apps—say, an FTP download and a Web-browser session—before you notice an impact on your telephone calls. The truly network-savvy user can buy a third-party device that, when connected to a broadband router, gives phone traffic higher priority, to avoid quality problems.

If having emergency dialing is important to you, ask how the ITSP will handle 911 calls and get its assurance that it can route such calls—before you sign up. Finally, consider using your current ISP. Many ISPs, including Comcast, Verizon, and Speakeasy, offer ITSPs, and they might give you a discount on your Internet service just for signing up for one.



From Your Phone Internet telephone service providers allow you to use a traditional phone and phone number to place calls via your Internet connection.

video, too, but H.264 is supported only in OS X 10.4 or later. The latest release of iChat, which requires OS X 10.4.6, even allows voice and video calls with AIM users on Windows.

Despite iChat's achievements, Apple's desktop VoIP program falls short in several areas. Unlike Skype and Gizmo, iChat doesn't allow you to place computer-to-phone calls. Although iChat is compatible with the

Google Talk IM application for Windows, voice calls to Google Talk users won't work. iChat doesn't support USB cameras, but shareware utilities such as Ecamm's iChat-USBcam can help you get around this limitation. Finally, iChat offers secure, encrypted communications only between users of .Mac, Apple's \$100-per-year Web service.

iChat is remarkably easy to use, but its feature set is beginning to lag behind those of other VoIP communication tools. Of course, if you don't need computer-to-phone calling and you chat only with Mac users, especially .Mac subscribers, iChat is probably your best choice.

Macworld's Buying Advice

iChat AV 3.1.4 has made VoIP chatting simple but still doesn't support computer-to-phone calling. People who need a VoIP conferencing tool that supports this should consider Skype or Gizmo Project instead.

Gizmo Project 1.3

SIPPhone's Gizmo Project 1.3.2 has more bells and whistles than any other desktop VoIP tool for the Mac. In addition to standard text messaging and one-on-one voice-chat features, which are common to all of the VoIP tools we looked at, Gizmo offers a searchable user directory, a publicly accessible party-line conference room, and computer-to-phone calling. Gizmo's interface is a bit more cluttered than Skype's or iChat's, but this is forgivable: Gizmo offers a lot more goodies than your typical text- and voice-chat application.

Whether you run Gizmo on OS X, Windows, or Linux, you get the same feature set, the same user interface, and roughly the same performance. This is obviously important to folks who jump back and forth between platforms frequently.

Gizmo implements basic text- and voice-chat features much as its competitors do, and



Other Messengers iChat's VoIP features let you have audio and video chats with other iChat participants who use the AIM and Google Talk IM services.

it offers built-in one-click call recording. Just click on the Record button while a call is in progress, and Gizmo will save it as an audio file. Gizmo lets you customize your hold music so that when you place a call on hold, the waiting person will actually hear what you want him or her to hear. Any WAV file will do (although unfortunately only this Windows format will work); Gizmo also comes equipped with a selection of ready-made WAV music loops.

Gizmo includes a feature called Call Quality Assistant, which mimics a cell phone's signal-strength indicator. This unique tool lets Gizmo gauge the quality of your Internet connection, giving you some idea of how good your VoIP calls will sound. On a fast Internet connection where Gizmo has the

continues



Easy Contact Gizmo Project's buddy list gives you quick access to groups of contacts. The built-in Party Line is a great way to get to know Gizmo.



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— Macworld, February 2006

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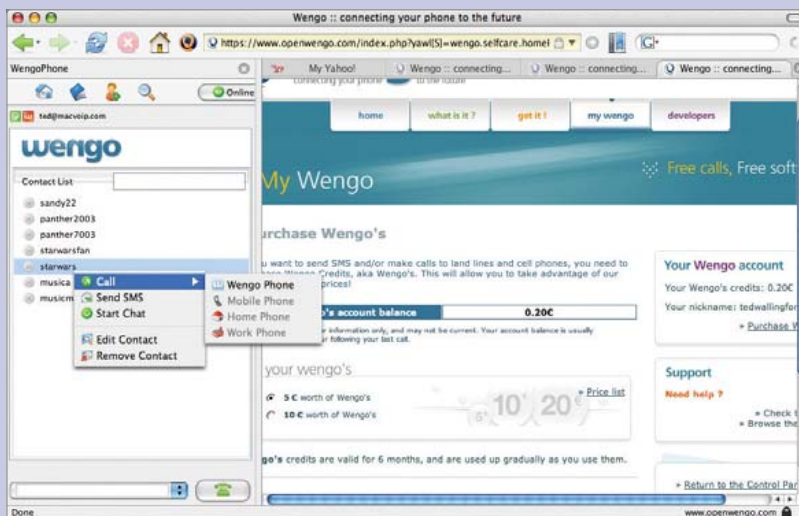
REVIEWS

entire pipe to itself, the quality of VoIP calls is quite good, so the Call Quality Assistant tool isn't much use. But when you're using slower Internet connections, such as certain low-performance DSL services, or running a few FTP downloads in the background, it certainly is helpful to know in advance if your call will have audio problems.

Gizmo also offers something you won't find in any of the other Mac desktop VoIP tools: direct dialing of SIP URIs (Session Initiation Protocol Uniform Resource Identifiers). This powerful feature enables you to

place calls to people by dialing a string (called a URI) that resembles an e-mail address, like this: `user_name@sip.macvoip.com`. Using this string, the Internet can route your call via DNS (Domain Name Service), as it would traditional Internet apps such as e-mail. Some VoIP experts believe that a SIP URI, which resembles an e-mail address, will one day make you reachable via any service, including VoIP, fax, cell phone, and e-mail. Gizmo is leading the way on this.

continues



Stay in the Browser WengoPhone's user interface is a Firefox sidebar, which is great—if you spend most of your time in Firefox.

VoIP from the Browser

WengoPhone Firefox Extension 0.68

Most desktop VoIP communication tools are stand-alone applications that operate independent of other software on your Mac. But the newest beta version of WengoPhone Firefox Extension, (0.68), an extension to the Mozilla Firefox browser, lets you tap into the world of VoIP calling from within Firefox. The WengoPhone beta is the first and only browser-based VoIP product for the Mac.

Once installed, this plug-in logs you on to Wengo's VoIP network and lets you call other Wengo users, as well as traditional phone numbers, from a buddy list located in the left sidebar of the browser window.

Like other VoIP-calling tools, Wengo allows you to set a status message (away, do not disturb, and so on). You can send your buddies text-chat messages, SMS (simple messaging system) messages, Internet voice calls, and computer-to-phone calls, for which Wengo provides an on-screen ten-button keypad like that of a traditional telephone.

All calls placed via WengoPhone are free except for computer-to-phone calls, which incur a by-the-minute fee billed in euros.

WengoPhone is probably useful only to people who spend most of their browsing time in Firefox.

If you do a lot of calling from numbers on Web pages, WengoPhone could save you time with its Click-to-Call feature, which lets you instantly call any phone number you see on a Web page, via a right-click (or a control-click) pop-up menu.

But living your telephony life totally inside the Firefox environment isn't a walk in the park. The WengoPhone sidebar is too wide and takes up too much space in the window. Wengo's account-management pages, which appear in the browser while WengoPhone is running, are too large to display properly on a 1,024-by-768 monitor unless you close the sidebar. Windows users can run WengoPhone as a stand-alone application, but Wengo hasn't released a stand-alone Mac version.

Placing computer-to-computer calls was no problem with Wengo, but computer-to-phone calls were hit or miss. Sometimes outbound calls could not connect, yet Wengo would not advise me of that. Calls that did connect successfully had consistent, usable audio quality, and I was never disconnected once a call was in progress.

WengoPhone shows a lot of promise, but its execution of desktop VoIP features is compromised by the fact that it's tethered to Firefox.



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As a Gizmo user, you have the option of placing calls to traditional phone numbers. This service, dubbed CallOut, lets you make computer-to-phone calls in a manner similar to how you'd do it in Skype. Likewise, you can obtain a permanent CallIn phone number from Gizmo. This standard phone number lets people call you from a land line or a cell phone. You can elect to have this number simultaneously ring a traditional phone (your home or cell phone) and Gizmo, so you can answer the call on either your Mac or your phone.

Gizmo has a couple of negatives, though: it has no video capability, and its conference calling isn't as seamless as Skype's. Also, Gizmo's user community is far smaller than Skype's, so you're less likely to find your contact on Gizmo than on Skype.

Macworld's Buying Advice

Gizmo Project is the most advanced Skype competitor on the market, and its many unique features make it worth a serious look. For business users, Gizmo has the edge with its configurable hold music, built-in call recording, and simultaneous ring options.

SightSpeed 4.5

SightSpeed 4.5 is a VoIP communication application that lets users chat via text, voice, and video with other SightSpeed users, whether they're running the Mac or Windows version of the software. You can also send and receive traditional voice mails and video-mail messages with other SightSpeed users. Like its competitors, it requires a microphone for voice chat and a desktop Web camera—such as the iSight—for video chat.

Internet Telephony Service Providers

Vonage www.vonage.com
 Speakeasy www.speakeasy.net/voip
 BroadVoice www.broadvoice.com
 Comcast macworld.com/1389
 Lingo www.lingo.com
 VoicePulse www.voicepulse.com
 Packet8 www.packet8.net
 SunRocket www.sunrocket.com

While the basic version of SightSpeed is free, you'll need the premium version if you plan on using its advanced features, which include multiparty videoconferencing. The free plan includes basic calling features such as unlimited computer-to-computer video and voice chat, and video-mail messages that are up to 30 seconds long. You can store these messages on SightSpeed's server for up to 30 days. The Pro plan, which costs \$4.95 per month, adds unlimited video-mail storage and allows you to send video messages that are up to one minute long. You also get multiparty videoconferencing with the premium service. Neither plan supports computer-to-phone calling.

You must set up an account to use SightSpeed. To do so, visit SightSpeed's Web site, where you can enroll in either the free

continues



The SightSpeed Challenge Though SightSpeed's interface is very different from iChat's, its video quality and parental controls make it a great challenger to Apple's aging chat program.

or the premium service plan. SightSpeed offers a free Webcam to Windows users who pay in advance for a full year of premium service—an up-front fee of \$50. Unfortunately, you can't use the Webcam with a Mac, so SightSpeed recommends a Mac-compatible camera such as the iSight. Interestingly, if your chat partner's camera supports pan-tilt-zoom controls, you can actually control the angle and zoom of that camera with your Mac SightSpeed software. SightSpeed touts its video-mail recording capabilities as an advantage for video bloggers, but serious vloggers may chafe at the one-minute recording limit.

The quality of SightSpeed's sound and video is similar to that of other VoIP chat tools. Though you can't resize its main window, you can detach its video display from the main window and resize it to your liking. This program's un-Mac-like interface makes it seem oddly out of step with most contemporary Mac software. (However, some users may appreciate the fact that SightSpeed's interface is identical on Mac and Windows.) In spite of these quibbles, SightSpeed is easy to use, so first-time video-chat users might want to check it out.

SightSpeed's community feature (in beta at press time) lets users easily find other people to chat with. When you join the

SightSpeed community, you can create a profile that other community members can view. To keep your kids away from potentially inappropriate audio- and video-chat contacts within the community, SightSpeed allows you to create a parental-control password. There seems to be no way to view a particular user's profile or to search profiles from within the SightSpeed software, which can be frustrating if you're looking for somebody who shares your interest in a topic or who comes from a certain part of the world.

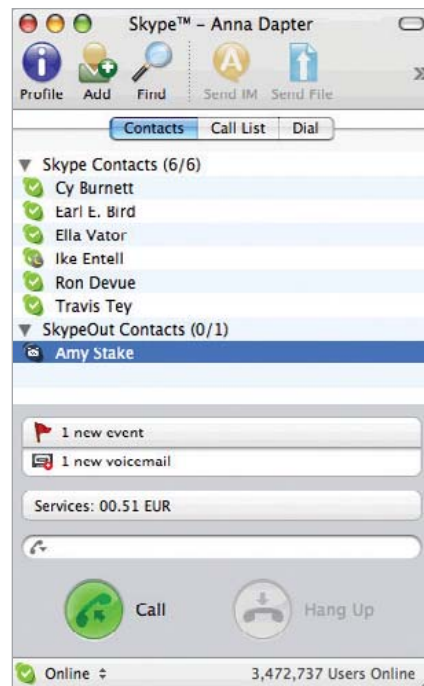
Macworld's Buying Advice

SightSpeed offers a unique combination of cross-platform voice and video features. If you're looking for a video-chat tool that has stronger community features than iChat, give SightSpeed a try.

Skype 1.4

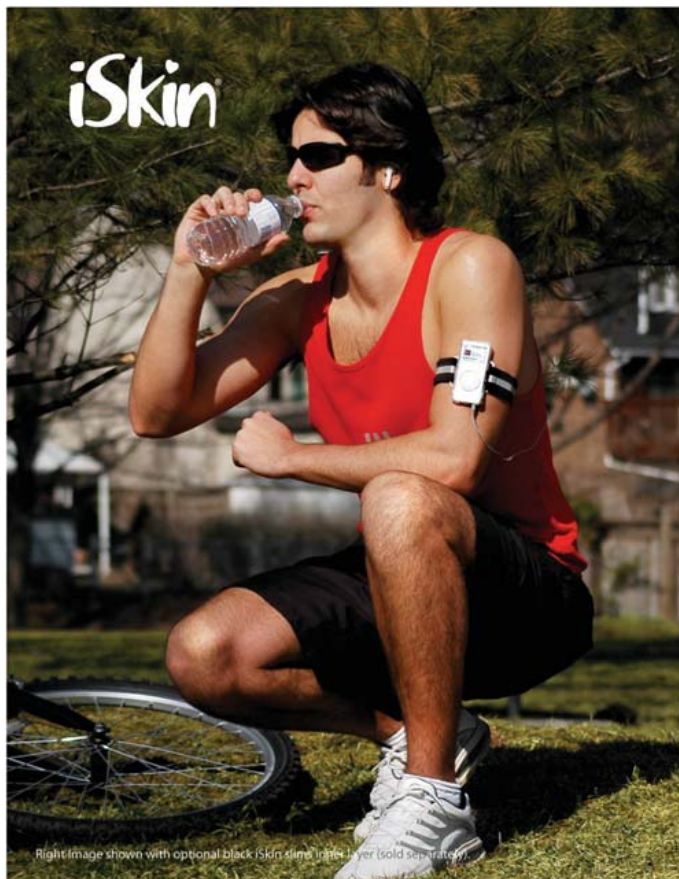
Perhaps the most popular desktop VoIP communication tool, Skype 1.4 evolved from the controversial peer-to-peer technology that powers the Kazaa file-sharing application for Windows.

Skype is a highly refined VoIP application that is compatible with OS X, Windows, and Linux. It permits users to send text messages and make voice calls to other Skype users, as well as place computer-to-phone calls to traditional telephone num-



Derived from IM With its contact list, Skype looks a lot like a traditional IM application, such as iChat.

bers. The active Skype user community is said to number around six million simultaneous users at any given time. This is good, because it means you're more likely to



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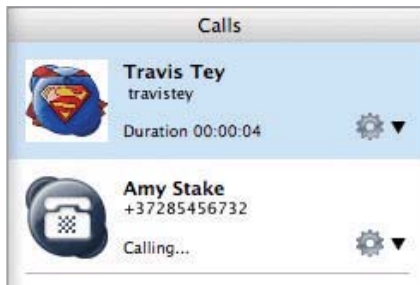
iSkin by iSkin Inc., All Rights Reserved 2006. iPod is a registered trademark of Apple Computer.

find your contact on the Skype network than on any other computer-to-computer calling system.

Skype's efficiently designed user interface resembles that of a traditional IM application such as iChat or Yahoo Messenger: essentially, it's a list of your contacts and a call history. You can access basic features, such as changing your status and placing calls to someone in your contact list, using a menu-bar icon that appears whenever Skype is running. If the Skype window is active, you just double-click on a contact's name to place a call.

Like other VoIP calling tools, the Skype software is free. If you choose to call (or receive calls from) a traditional telephone number, you'll pay per minute, using pre-purchased credits called SkypeOut minutes. Skype also offers other premium features, including voice mail. This feature works more or less like traditional voice mail, answering your calls with a recorded greeting when you're not around and capturing a voice message from the caller for you to retrieve later on. Skype offers conference calling too, so you can have a voice chat with as many as five participants at a time.

Once you become a Skype user, you can also obtain a SkypeIn number that users of traditional land-line and cell phones can reach you at. When they call this number,



Anyone Can Talk Skype allows other Skype users and people on traditional phones to participate in your conference calls.

Skype connects calls to the Mac where you've logged on to your Skype account. This SkypeIn number could save you a lot of money on international long distance. If you are always receiving calls from family in, say, Poland, then you could get a Polish SkypeIn number to reduce the charges your family incurs by calling you. Skype offers SkypeIn numbers all over the world. Using Skype's call-forwarding feature, you can easily forward your unanswered calls to another Skype user or to a phone number of your choosing.

The computer-to-computer calls offer extremely high-quality audio, thanks to Skype's choice of a proprietary sound standard and a commercially licensed audio encoder. Skype also secures calls through a

very strong encryption scheme, making it nearly impossible for would-be eavesdroppers to monitor your calls. It allows you to customize your ring tones, and it will even automatically pause a current iTunes track when you receive an incoming call.

Skype is well integrated with OS X. For example, you can use Skype's Import function to populate your Skype contact list with the phone numbers in your Apple Address Book. Skype also supports AppleScript, so you can tie it into other applications to build specialized telephony functionality—for example, a FileMaker sales-contact database that automatically dials prospects on a pre-determined callback schedule. Unfortunately, the Mac version of Skype does not support videoconferencing.

Macworld's Buying Advice

Skype is a mature, reliable, and popular VoIP communications tool. Though the Mac version lacks video features, it offers unmatched sound quality, convenience, and ease of use. If you need a desktop VoIP tool that also allows you to dial traditional phones, there's nothing better than Skype. □

TED WALLINGFORD is the author of *Switching to VoIP* and *VoIP Hacks* (both O'Reilly, 2005) and an independent technology consultant based in Elyria, Ohio. He updates the Web site www.macvoip.com semiannually.

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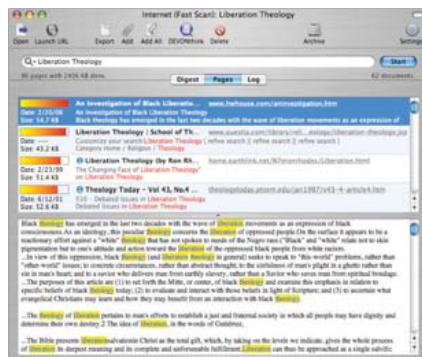
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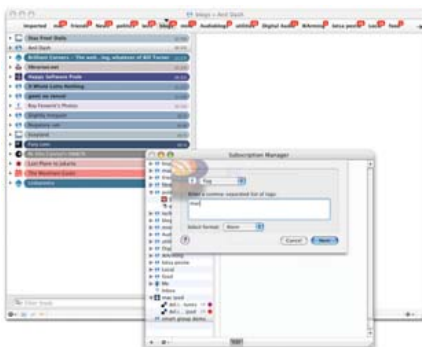
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★★★★½ **After Effects 7 Professional** ▲ (\$999; upgrade, \$199; upgrade from standard edition, \$499), from Adobe (www.adobe.com): After Effects 7 Professional—the compositing and motion-graphics application of choice for many film producers, industrial videographers, and Web animators—is an extremely complex program, and its new interface does an excellent job of organizing and presenting its overwhelming number of controls. Version 7's interface overhaul, improved performance, new Curves editor, and other features make it a truly great upgrade (macworld.com/1338).

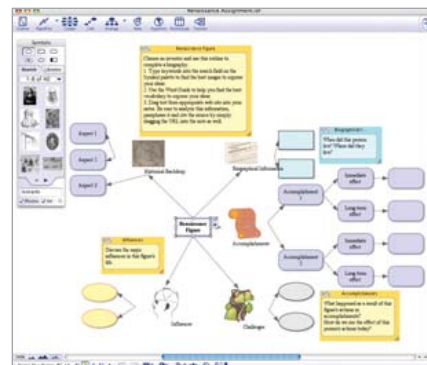


★★★★½ **DevonAgent 2.0** ▲ (\$50; upgrade, \$20), from Devon Technologies (www.devonthink.com): DevonAgent 2.0 is a program that queries multiple search engines, filters and summarizes search results, and makes it possible to find the proverbial needle in the haystack of information on the Web. It's easy to use and provides the kind of industrial-strength searching capabilities once reserved for academic circles (macworld.com/1339).



★★★★½ **endo 1.0** ▲ (\$18), from Kula (www.kula.jp): endo 1.0.21, an RSS news reader, is a good choice for

news-feed addicts with a bevy of subscriptions—especially those who are also bloggers or who download lots of media files. And endo abandons the traditional e-mail-like interface of most news readers in favor of a space-saving design that devotes more screen real estate to individual articles (macworld.com/1338).



★★★★½ **Inspiration 8** ▲ (\$69), from Inspiration Software (www.inspiration.com): Inspiration 8 is an excellent tool for teachers, students, or anyone who needs help organizing ideas. It lets you record and organize your thoughts from scratch or build diagrams from included templates. The addition of symbols and the ability to import movies and sounds add to the program's value (macworld.com/1340).



★★★★½ **Little Snitch 1.2** ▲ (\$25), from Objective Development (www.obdev.at): Little Snitch 1.2.2 is a valuable application that picks up where Mac OS X's built-in firewall leaves off. It watches for outgoing traffic—connections from software running on your Mac to addresses on the Internet. Aimed at the increasing population of users whose computers are constantly online, Little Snitch 1.2.2 can provide an early warning that a malicious program is running on your Mac and attempting to connect to remote systems (macworld.com/1342).

★★★★ **ShutterBug 2.0** ► (\$50), from XtraLean Software (www.xtralean.com): ShutterBug 2.0, an easy-to-use Web site-building application, is aimed at nondesigners who want to showcase their photography

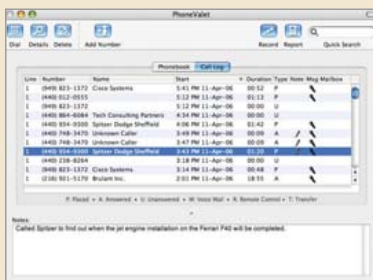


INTERNET TELEPHONY

Mac-Phone Link



🔗🔗🔗 **Phlink 3.0** (\$150; upgrade, \$40), from Ovalab (www.ovolab.com): Phlink 3.0.1 is a telephony-automation application for Mac OS X that lets you connect your Mac to a phone line. It provides a simple hardware and software setup and interface for handling phone calls. Version 3.0.1 adds a number of worthwhile new features—call recording and storage, one-click call back, and a voice-mailbox setup wizard—that make it a valuable upgrade (macworld.com/1343).



🔗🔗🔗 **PhoneVale Message Center 4.0** (\$170; software upgrade from version 2, \$30), from Parliant (www.parliant.com): Parliant's PhoneVale is the premier telephone-message-recording system for the Mac, and the newest version, 4.0.3, extends the package's leadership position. PhoneVale Message Center 4.0.3 does more than just answer calls—it also dials, records, and logs calls, lets you search through calls, and even automatically connects calls to your cell phone if you're on the road (macworld.com/1344).

online without having to learn HTML. ShutterBug 2.0 includes more than 25 themes to help photo enthusiasts create Web sites quickly. More-advanced users can customize the built-in themes or create their own (macworld.com/1341).

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iPod Gear

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Home Stereo Connections

★★★★ iPod Home Connect Kit (\$15), from Griffin Technology (www.griffintechnology.com):

Griffin's iPod Home Connect Kit features two cables with gold-plated connectors. On one end of each cable is a minijack that plugs into your iPod or dock. The six-foot cable connects to the inputs on most stereo receivers and amplifiers. The seven-inch cable can attach to standard stereo cables. You can also use the two cables together to plug into most portable and computer speakers (macworld.com/2144).



the HomeDock provides video output and lets you sync your iPod while it's docked. The HomeDock offers the same RCA audio jacks as most home stereos, so you can use standard stereo cables. If you'll use the HomeDock's additional features, it's worth the extra money (macworld.com/2133).



★★★★½ Stereo Dock for iPod (\$80), from Kensington (www.kensington.com): If you simply want to connect your iPod to your stereo, Kensington's Stereo Dock is an attractive way to go. Your iPod is even charged while docked. The Stereo Dock's infrared remote control provides typical iPod-remote functionality, but it's larger and more comfortable than most remotes and has backlit buttons (macworld.com/2165).










★★★★ TuneStage for iPod (\$180), from Belkin (www.belkin.com): Belkin's TuneStage is a unique product that avoids the limitations of most iPod remote controls by making the iPod itself your remote—giving you complete control and letting you see everything up close. You connect a small transmitter to your iPod's headphone and remote jacks and then send your audio wirelessly to a Bluetooth receiver connected to your stereo or speaker system up to 30 feet away. It doesn't work with fifth-generation iPods and nanos—a dock-connector version is due later this year (macworld.com/2119).



★★★★ HomeDock (\$100), from Digital Lifestyle Outfitters (www.dlo.com): Unlike the Kensington Stereo Dock,

iPODS

Product	Capacity	Rating	Price	Display	Battery-Life Maximum	Media Supported	More Information
 iPod	30GB	★★★★½	\$299	2.5-inch color	14 hours of music playback, 3 hours of slide shows with music, 2 hours of video playback	music, photos, album art, video	macworld.com/1020
 iPod	60GB	★★★★½	\$399	2.5-inch color	20 hours of music playback, 4 hours of slide shows with music, 3 hours of video playback	music, photos, album art, video	macworld.com/1021
 iPod nano	1GB	★★★★½	\$149	1.5-inch color	14 hours of music playback, 4 hours of slide shows with music	music, photos, album art	macworld.com/1175
 iPod nano	2GB	★★★★½	\$199	1.5-inch color	14 hours of music playback, 4 hours of slide shows with music	music, photos, album art	macworld.com/1022
 iPod nano	4GB	★★★★½	\$249	1.5-inch color	14 hours of music playback, 4 hours of slide shows with music	music, photos, album art	macworld.com/1023
 iPod shuffle	512MB	★★★★½	\$69	N/A	12 hours of music playback	music	macworld.com/0368
 iPod shuffle	1GB	★★★★½	\$99	N/A	12 hours of music playback	music	macworld.com/0369

N/A = not applicable.

NEW: CAR IPOD DOCK



★★★★½ flexibleDock (\$50), from Ten Technology (www.tentechnology.com): Like the original flexDock for iPod mini, the flexibleDock plugs into your car's cigarette lighter and has a six-inch arm with a dock cradle that holds your iPod. But unlike the flexDock, the flexibleDock works with all dockable iPods by using one of several included adapters. The flexibleDock

charges your iPod and provides an audio output jack on its base so you can connect your iPod to your car stereo via a cassette adapter or an auxiliary audio cable (macworld.com/1272).

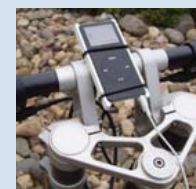
NEW: EARBUD HEADPHONES

★★★★½ remix m-class (\$50), from V-moda (www.v-moda.com):



If you're a fan of the earbud-style headphones Apple includes with the iPod but want to upgrade, check out the remix m-class earbuds. Available in three flashy colors—metallic blue, metallic pink, and silver—their fit and finish are impressive. These earbuds are made of polished metal alloy, instead of the plastic shells of most models, and the headphone plug is plated with 24k gold. The remix m-class earbuds also stand out with surprisingly good sound (macworld.com/1273).

NEW: BICYCLE MOUNT



★★★★½ Mork Mount (\$30), from Risse Racing (www.risseracing.com): The nano has become the iPod of choice for many active types, thanks to its skip-free flash storage

and the iPod's famous interface. If you're a cyclist, you can attach Risse's Mork Mount to your bike's handlebars. It provides a slim aluminum cradle into which you slide your iPod nano. The cradle protects the back and sides of your nano, while two elastic rubber O-rings hold your iPod securely in place. Its mounting bracket fits only handlebars that are 0.875 inches or less in diameter (macworld.com/1274).

Game Room

BY PETER COHEN

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American History Lux Released

Sillysoft Games (www.sillysoft.net) has released American History Lux, a new strategy game that lets you replay ten wars that helped shape American history. The game is based on Sillysoft's Lux Deluxe—a 2-D strategy game modeled after the classic board game Risk. A playable demo is available for download.

Pangea Donates Games

Pangea Software, maker of Enigma 2, Otto Matic, Nano-saur, and many other games, has always had a liberal policy for schools: buy one copy, and it'll give the school a free site license. Now Pangea's doing one better: it'll donate free software to schools that send a letter signed by the principal (www.pangeasoft.net).

MS Nabs Lionhead

Microsoft has acquired Lionhead Studios, the original developers of Black and White 2 and Fable: The Lost Chapters. The acquisition won't affect the upcoming Mac conversion of those games by Feral Interactive. But it's unknown whether future Lionhead games will be released exclusively for Microsoft's Xbox 360.



In the Hole! Islands Mini Golf gives you five courses to choose from—some are real stumpers.

ARCADE

Islands Mini Golf

Nothing says summer like a good game of mini golf. For those of us who prefer to skip the crowds, and instead try our putting skills in a lush tropical setting, there's Islands Mini Golf.

In Islands Mini Golf, by DanLab Games, the putt direction is represented by a 3-D cursor that moves away from the ball; a meter on the right side of the game's interface shows the ball's speed. You'll need a bit of practice to determine how hard you need to hit the ball to get it into the cup. Each hole has its own set of hazards and challenges. Fortunately, you can take practice sessions before you start playing for keeps. If you need to reorient yourself during play, you can use the function keys to change your point of view.

Just like any good golf game, Islands Mini Golf lets as many as four players compete on each hole. The game features "hot-seat" play, meaning players take turns using the same computer. Alas, network play is unavailable.

When you're done, the game records your best score, which you can compare with the scores of other players from around the world, using an online table. This is all very well and good; however, I'd love to see the game include online play.

Islands Mini Golf has five courses to choose from—that's 90 holes in all. Each course has a unique look-and-feel. For example, Coco Paradise is a tropical island while the Zhao Islands course has a decidedly Asian flavor.

Some of the holes are really, really tough—I mean head-bangingly frustrating. In some cases, your ball can roll right off the course and

RATING: ★★★★★

PROS: Beautiful water effects; online scores; hot-seat play for up to four players.

CONS: No network play; some frustrating course designs.

PRICE: \$26

OS X COMPATIBILITY: 10.3 (Panther), 10.4 (Tiger)

PROCESSOR COMPATIBILITY: Universal

COMPANY: DanLab Games, www.danlabgames.com

into a water hazard unless you apply just the right touch with your putter or take baby steps with short strokes. Adding to the frustration, some holes have what seem like impossibly low par ratings. If you get fed up, you can skip holes, though you'll be penalized with a maximum stroke score. Fortunately, you can save games, which makes Islands Mini Golf a great diversion during a commute or between meetings.

The game features a fabulous custom soundtrack and gorgeous graphics that help set the tone. A recent 1.4 update adds water shaders for OS X 10.4 users. As a result, the water that surrounds the island (and often figures into traps and hazards) has a shimmering, wavy quality that's quite beautiful. Of course, if your Mac can't handle these new graphics, you can still use the previous shader. Minimum system requirements call for a 400MHz G4 processor and OS X 10.3.

The Bottom Line Islands Mini Golf is a beautiful 3-D mini-golf game that offers some truly challenging game play.

continues

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Macworld
1/2
May 2005

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GAME ROOM



ROLE-PLAYING ADVENTURE

Avernum 4

★★★★; Spiderweb Software, www.avernum.com; \$25

Avernum 4, by Spiderweb Software, offers a return to the classic form of turn-based role-playing games. It may not be everyone's cup of tea, but it should please RPG fans who value substance over style.

The underground world of Avernum is home to numerous life-forms—many of whom are determined to do you harm. You'll encounter these inhabitants as your party sets off on missions to discover who's behind the deadly chaos sweeping the land.

Though you'll see a bit of animation in the combat sequences—the swing of a sword here, a burst of light there—the game's graphics are mostly static. The

old-school isometric graphics may feel antiquated to some gamers, but I consider it part of Avernum's charm.

More importantly, Avernum 4 offers some of the richest RPG storytelling experiences on any platform, serving countless challenges like a good dungeon master should. Exploring the game's branching story line will take you weeks, if not months. That said, there's really only one way to win—so once you're done, you may not be interested in a second round.

The game is also incredibly versatile—running equally well on Mac OS 8.1 and OS X, even on the latest Intel machines. This is classic RPG gaming at its very best. If you're not convinced, download the demo before you buy (macworld.com/1346).

REAL-TIME STRATEGY

Tribal Trouble

★★★★; Oddlabs, www.tribaltrouble.com; \$30

Tribal Trouble, by Oddlabs, isn't your typical real-time strategy (RTS) game. For one thing, you won't need an advanced degree to understand how to play. It's also funny—pitting inebriated, red-nosed Vikings against native islanders in grass skirts and tiki masks.

Windows Games on Your Mac

Many of us who play games on Macs get frustrated with the platform's limitations—particularly when it comes to getting the big-name games. Mac versions tend to come out later (if at all), play slower, cost more, and often lack cross-platform, multiplayer support.

But all that changed in April 2006, when Apple released Boot Camp—a public beta of software that lets Intel Mac owners switch between OS X and Windows XP with a simple reboot. And unlike with emulation and virtualization software, you aren't penalized with slower performance. Any games that will run on an equivalent PC will also run on the Mac.

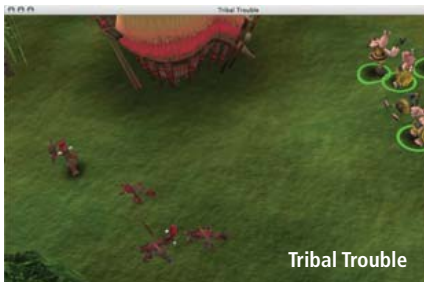
I've already loaded up my Intel iMac with games such as Tomb Raider Legends, Blazing Angels, and Half-Life 2. Not only do they all run, they run quite well. I was able to run most games with trilinear effects, full scene antialiasing, and various other options turned on, all without suffering huge frame-rate losses.



But though the iMac is a well-endowed computer as far as processors go, its Radeon X1600 graphics card falls in the middle of the pack for PC performers, so I couldn't play games at high resolutions. For most of the games I tried, 1,024 by 768 pixels seemed to be a happy medium. So while the iMac is fine for online and offline PC

gaming, don't count on it hammering your friend's custom-built Athlon 64 rig with a top-of-the-line Radeon or GeForce graphics card. For a full performance comparison between an Intel iMac running Windows and an equivalently configured PC, go to macworld.com/1350.

This is exciting news for those of us who want to play games that aren't coming to the Mac. Hopefully, it'll also draw new users to the platform who wouldn't otherwise consider a Mac. Down the road, that might mean a larger share of the computer market for Apple, and a greater incentive for companies to invest in Mac game development. (For more on Boot Camp, see "Boot Camp FAQs," *Mac Beat*, page 14.)



Tribal Trouble

The game includes the typical RTS elements. Each side builds quarters to house their peons, the workers of the group. Peons, in turn, convert raw resources—rocks, iron, chicken beaks, and so on—into weapons, which you can then use to train your peons for battle. Each side also has a chieftain—an incredibly strong leader with particularly deadly powers.

The game's single-player campaign unravels chapter by chapter, first putting you in charge of the Vikings and then in charge of the natives as they seek their revenge. You can play skirmishes against the computer or play against other Tribal Trouble gamers online.

Fun, fresh, appealing, and easy to learn, Tribal Trouble offers plenty of challenges for experienced and new RTS gamers (macworld.com/1347).

PUZZLE

DROD: Journey to Rooted Hold

♦♦♦♦; Caravel Games, www.caravelgames.com; \$20

DROD: Journey to Rooted Hold, by Caravel Games, is a puzzle game with role-playing overtones. The game follows the adventures of Beethro, a sword-wielding dungeon hunter who has lost his nephew in an underground labyrinth filled with evil fiends and deadly traps.

Each time you press a directional key, Beethro moves one step. Then it's the bad



guy's turn to move. Staying out of trouble requires a bit of strategy. If Beethro makes contact with a baddie or a deadly trap, he's toast.

You'll have to replay certain rooms over and over until you find the right combination of moves to get out alive.

You see the game's action from above, in 2-D perspective—an old-school touch. The game's voice-overs and soundtrack are both surprisingly strong (the soundtrack is reminiscent of 1980s Nintendo games). And with more than 350 rooms, there's enough to keep you busy for hours (macworld.com/1348).



CHILDREN'S ACTIVITY

Welcome to Merriweather Farm

♦♦♦♦½; Bold Games, www.boldgames.com; \$20

Welcome to Merriweather Farm, by Bold Games, is a charming game that lets young kids play with combines, plows, and other equipment on a virtual farm.

The game includes six interactive activities. My six-year-old son was particularly fond of the racing game, in which you help Johnny Tractor plow a field while steering clear of obstructions and staying gassed up.

A cute soundtrack and cheery sound effects complement the game's cartoonish look-and-feel. However, I wish the game included a windowed mode, rather than scaling graphics to fill the entire screen.

Though John Deere equipment is featured, the game isn't one long advertisement—it's more about kids having fun down on the farm. Three levels of difficulty will keep the kids coming back. Success is rewarded with a new coloring page that they can print out (macworld.com/1349). □

Senior Editor PETER COHEN is not ashamed of his affection for old-school graphics and turn-based gaming.

Internet Filtering For Kids

Peace of Mind
When Your Child's Online

bumpercar
version 2.0



A Full Featured Web Browser
which includes:

Profanity
Filters

Ad & Pop-up
Blocking

Surf-time
Allowance

Download
Control

Available at select Apple
resellers and online at
FREEVERSE.COM

\$29 ⁹⁵

Site Licenses
for Schools Available

PORT RELOCATER

Desktop Multi-Hub

In December 2004, I wrote about Marathon's RePorter (★★★★; macworld.com/1277), a \$59 "extension cord" for your computer's many ports. The RePorter plugged into the various ports on your Mac and then, via a five-foot cable, brought those ports (FireWire 400, FireWire 800, audio in, audio out, and two USB 2.0) to your desk, in the form of a small hub.

Unfortunately, Marathon went out of business last year; since then I've received several e-mails asking whether I could recommend a similar product. Though it's not quite as attractive as the RePorter, Nyko's \$50 Desktop Multi-Hub (★★★★; www.nyko.com) fits the bill.

Like the RePorter, the Multi-Hub plugs into the ports on your computer and connects them to a hub in a more convenient location. However, the Multi-Hub offers ports that the RePorter doesn't: a four-pin FireWire 400 port (unpowered), two more USB 2.0 ports, two PS/2 ports, and an S-Video port (as well as a VGA cable).

Granted, neither the Multi-Hub's PS/2 ports nor the four-pin FireWire port will be of much use to Mac users. On the other hand, its two additional USB ports will probably be more useful to the typical Mac user than the FireWire 800 port that the RePorter had (the Multi-Hub doesn't have a FireWire 800 port). The Multi-Hub's cable is also longer—a total of six feet. Overall, the Multi-Hub provides a bit more functionality for a little less money.

The Multi-Hub falls short of the RePorter in aesthetics. Though the flat design of the Multi-Hub addresses one of my criticisms of the RePorter—that its round shape allowed it to roll around—the Multi-Hub's ports are spread around the outside of the hexagon, so you end up with a mess of cable spokes on your desktop once you've plugged everything in.

Still, if you've been looking for a way to get your ports on top of your desk with your Mac stuck underneath the desk, the Desktop Multi-Hub works well.



RePorter Redux The Nyko Desktop Multi-Hub is an extension cord for your Mac's ports.

FILE-COPYING UTILITY

iPodDisk 1.3

Though there are clearly unethical reasons for copying music directly from an iPod to a computer, there are also legitimate ones. As I explained when I reviewed Senuti (★★★★; *Mac Gems*, macworld.com/0965)—an app that provides an easy-to-use, iTunes-like interface for transferring your music from your iPod to your computer—if your hard drive suddenly bites the dust and you didn't back it up, you need a way to pull files from your iPod. Or you might simply want to copy music from your iPod to your laptop while you're on the road. Unfortunately, Apple provides no official way to perform these tasks.

Recently, I tried an alternative to Senuti that takes a different, but similarly easy, approach: Isaac Huang's free iPodDisk 1.3 (★★★★; ipoddisk.ourbiti.com). Whereas Senuti runs as a standard application—one that closely resembles iTunes—iPodDisk is basically invisible: It simply mounts your iPod in the Finder, where it shows up just like any other FireWire or USB hard drive. (Your iPod must have disk use enabled, via iTunes' iPod preference pane, for iPodDisk to work.)

The magic of iPodDisk is that it lets you browse your iPod's audio (and video) content in the Finder. You see the Albums, Artists, Genres, and Playlists

folders; opening one of them reveals your iPod's contents in the appropriate file and folder hierarchy. You can also use the Search field in Finder windows to quickly find particular items.

To copy music to your hard drive, you drag and drop, just as you would with any other file. When you're finished, ejecting iPodDisk's iPod volume quits iPodDisk, and then you can eject your iPod.

iPodDisk works only if your iPod is not linked to the iTunes library on the computer you're working on. This makes sense, because you wouldn't need iPodDisk if you were already on that computer—you would have direct access to the music files on the hard drive.



Easy iPod Access Recover music from your iPod right in the Finder.

One significant drawback I encountered while using iPodDisk is that I wasn't able to get it to work with the iPod shuffle; Senuti, on the other hand, works just fine with all iPod models.

That drawback aside, iPodDisk is an excellent tool for getting your music off your iPod, and it has earned a place on my hard drive—right next to Senuti.

AUDIO-STREAMING APP

Airfoil 2.0.2

When Apple introduced the iTunes feature to stream audio wirelessly to an AirPort Express base station, a common complaint about it was that you couldn't stream audio from any application other than iTunes. Not long after iTunes was announced, Rogue Amoeba solved this problem with its Airfoil application (★★★★; *Mac Gems*, macworld.com/1278), which lets you stream audio from any application running on your Mac—RealPlayer, Windows Media Player, your Web browser, or even a game.

In iTunes 6.0.2, Apple added the ability to stream audio to multiple AirPort Express base stations. But again, this feature was limited to iTunes audio. Rogue Amoeba had been working independently on an update to Airfoil, and—in a bit of good timing—released a new version of the app the same week. The \$25 Airfoil 2.0.2 (★★★★; www.rogueamoeba.com) can stream any non-iTunes audio to multiple AirPort Express base stations.

Like the original version, Airfoil 2.0.2 has a simple interface for choosing the audio source and the destination base stations. You choose a source and then click on a button next to each base station you want to stream to, or you can also use



Audio Express With Airfoil 2.0.2, you can set all audio—not just the music—free.

Tweaking Utilities

When it comes to tweaking settings in OS X, rotating caches, and performing various maintenance tasks, many utilities are available. Because there are so many of these apps, I'm often asked which ones I recommend. You can read my comprehensive roundup of more than 30 utilities, and find out more about the ones listed here, at the Mac Gems Weblog (macworld.com/1214). Here are my top picks.

AppleJack 1.4.2 This troubleshooting utility runs in single-user mode at startup—which means that it's still available to you if a problem you're experiencing is preventing you from booting into OS X (★★★★; free).

Font Finagler 0.5.3 If you're having font problems, the cause could be corrupt font caches. Font Finagler scans your drive for font cache files and then lets you delete them using an informative interface (★★★★; \$10).

Macaroni 2.0.7 Macaroni runs OS X's maintenance scripts, as well as a few other useful tasks, automatically—even if your Mac is off or asleep when the tasks would normally be performed (★★★★; \$9).

OnyX 1.6.9 Of the everything-but-the-kitchen-sink tweaking utilities, I like OnyX best. Although it doesn't have the best interface, it offers the best help of the bunch, clearly explaining what each setting does (★★★★; free).

Tiger Cache Cleaner 3.1.1 Many of the utilities I looked at can clear out cache and temporary files that might be causing problems. But Tiger Cache Cleaner offers the most options, and also includes the ClamAV virus scanner (★★★★; \$9).

TinkerTool 3.6.1 and TinkerTool System 1.5 Developer Marcel Bresink has taken much of the risk out of using tweaking utilities by separating safe actions from potentially risky ones: user-level preference settings are available via TinkerTool (which any user can run), whereas system-level and administrative settings and actions are limited to TinkerTool System (which only an administrator can run). In addition, TinkerTool System finely divides its functions into topical tabs, with each tab providing clear warnings about the function therein (TinkerTool, ★★★★; free; TinkerTool System, ★★★★; \$9).

Airfoil 2's Dock menu to do the same without switching to the app itself.

By default, Airfoil 2 automatically keeps the remote speakers synchronized. You can control the volume level of each speaker via Airfoil, or you can set Airfoil's preferences so that it links remote-speaker levels to your Mac's volume control. In either case, the Airfoil window displays an output-level meter, so it's easy to tell if audio is actually being broadcast.

Though you can easily stream audio using Airfoil, there's a slight delay between when a sound is produced by an application and when it's relayed through AirPort Express. (iTunes' AirTunes suffers from the same delay.) So don't expect to watch a DVD on your computer while playing the audio through your stereo.

One welcome improvement from the original release is that version 2.0.2 works with password-protected AirPort Express base stations. There's also a built-in equalizer, and balance and volume-overdrive controls let you adjust the sound going to remote speakers. You can force Airfoil to refrain from actively synchronizing audio when playing on multiple remote speakers; you can choose to listen to audio on your computer while the audio is being transmit-

ted wirelessly (but local and remote audio will not be synchronized); and a number of advanced settings related to gap fills, stream indexes, and buffering are available for tweaking Airfoil 2's performance and behavior.

Airfoil 2 does have a few limitations. The most significant is that if your home wireless network uses 802.11b instead of the faster 802.11g, you may experience skips and stalls, especially when streaming to multiple base stations. Another limitation is that Airfoil doesn't support Fast User Switching, mainly because of the way OS X handles audio between accounts. And like the previous version, Airfoil 2.0.2 has a minor quirk in the way it interacts with already-running applications. If you choose not to use the app's Instant Hijack add-on (which uses Unsanity's Application Enhancer technology, software that some people refuse to use for stability reasons), you need to either select the desired audio application in Airfoil before launching that app, or allow Airfoil to relaunch it if it's already running when you begin transmission.

Still, Airfoil 2.0.2 is a unique product. It overcomes several of the limitations I noted in my review of the previous continues

version and makes Apple's AirPort Express a legitimate option for sending audio all over your house.

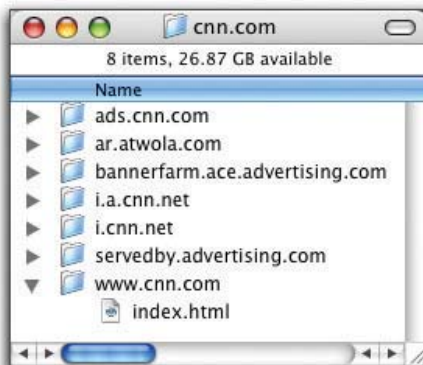
SAFARI ARCHIVE EXTRACTOR

WebArchive Folderizer 1.2.3

One of the welcome additions to version 2 of Safari (included with Tiger) is its ability to save an entire Web page—text, images, and all—for offline viewing. You can open the resulting .webarchive file in Safari, and it will look pretty much like the page viewed normally on the Web.

This is a great feature; however, it has two downsides. The first is that you can view these Web archives only in Safari 2 (so you can't send them to someone using anything other than Tiger—including Windows). The second is that if you ever need to get at any of the images or text in an archive, you must use Safari to open the archive, and then grab the content from there.

An easy solution to both of these problems is Greg Weston's free Web-Archive Folderizer 1.2.3 (🔗🔗🔗; [macworld](#)



De-Archive WebArchive Folderizer lets you extract content from Safari's Web archives.

[.com/1276](#)). Drag a .webarchive file into WebArchive Folderizer's generic-looking window (or onto its application icon), and in just a few seconds the utility extracts the contents of the Web Archive into a folder (located in the same directory as the original .webarchive file). Inside that folder, the original hierarchy of the archive's contents is preserved; you can easily grab any of the contents of the archive or—by finding the index.html file of the original Web page—open the archived page in any browser.

Unfortunately, WebArchive Folderizer can't perform magic. Because of the way

some sites are coded, you can't open many "folderized" archives using the index.html files, and even with those you can, the result doesn't always look exactly like the original. Similarly, with some Web pages, some text or images won't be available in the folderized archive because Safari didn't include them in the original archive. Despite these issues, WebArchive Folderizer has already come in handy for me several times.

E-MAIL KEYWORD UTILITY

MailTags 1.2.1

Spotlight drives me bonkers at times, but it can be very useful. One of its best features is smart searching—for example, this technology lets you assign a set of criteria to a mailbox, and then access all items that fit those criteria simply by clicking on the smart item. In effect, you're saving a specialized search, but the search results are updated on-the-fly.

In Mail, smart mailboxes let you instantly filter tens of thousands of e-mail messages; you don't have to create a folder for specific messages and then manually file them in that folder. The problem with

THE CONQUEST

DiskWarrior is Now OS X Native

It's the indispensable utility that repairs problems such as disks that won't mount, files you can't trash, and folders that have disappeared. MacUser magazine said, "It's the fastest and safest data recovery utility you can buy."

Macworld magazine said, "DiskWarrior is by far the best disk utility available for the Mac; it can repair virtually any disk problem you may

encounter...and it is likely to become the only tool you'll want to keep with you at all times."

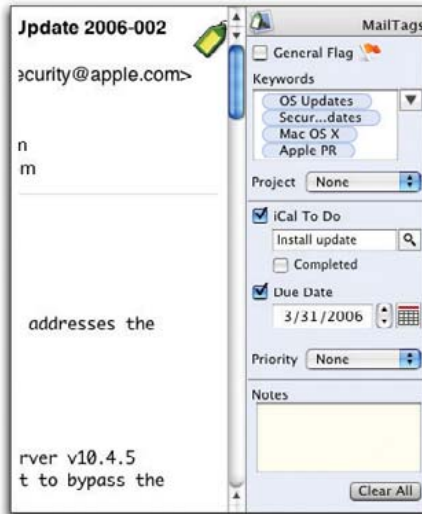
David Coursey, ZDNet AnchorDesk, agrees in an article comparing disk utilities. He used it to fix a disk that no other utility could. "DiskWarrior is a great product, not just because it fixed a pretty serious screw-up, but because it showed me what it planned to do in minute detail before doing it."

But disk damage isn't the only threat to your data. As hard drives get older, the drive mechanisms

smart mailboxes is that they search only the actual contents of your messages: message bodies, headers, senders, and recipients. I've always wanted a way to categorize my Mail messages with keywords or tags, as you can in Microsoft's Entourage or Google's Gmail. Then I could search for messages—and thus create smart mailboxes—by categories.

If you're in the same boat, you'll like Scott Morrison's free MailTags 1.2.1 (★★★★; www.indev.ca). From the same developer who brought us Mail Act-On (★★★★; *Mac Gems*, macworld.com/1275), MailTags lets you assign keywords to individual messages, via a sidebar it adds to the side of Mail's message window. The great thing about keywords, as opposed to simply moving messages to folders, is that you can assign multiple keywords to one message. That message will then appear in smart mailboxes (or specific searches) that include any of these search terms, even if the e-mail message doesn't contain any of these words. (You can also use MailTags to organize messages by project.)

MailTags doesn't stop at simple categories and projects, though. It also lets you add notes to messages, set and view



Categorize Mail MailTags lets you apply labels and calendar events, which can be used by smart mailboxes, to Mail messages.

message priority (which other e-mail clients let you set and view, but which Mail doesn't), and even set response due dates that appear in iCal as To Do items.

Once MailTags is installed, you'll find a small tag in the upper right corner of Mail messages—clicking on this tag displays the MailTags panel, which lets you

assign keywords, either by typing them in or by choosing previously used keywords from the pop-up menu.

Another thing I really like about MailTags is that its features aren't limited to mail you've received. When composing a new message, you see the same sidebar with the same options; this lets you include sent mail in your smart mailboxes. Even better, you can set MailTags to assign an original message's keywords and project tags to your response.

You can also assign or set any of MailTags' tags via Mail rules. For example, I can set up a rule that automatically assigns the keyword *Macworld* to any message sent to me by a member of my *Macworld* address group (even if some senders' e-mail addresses don't actually include *macworld.com*).

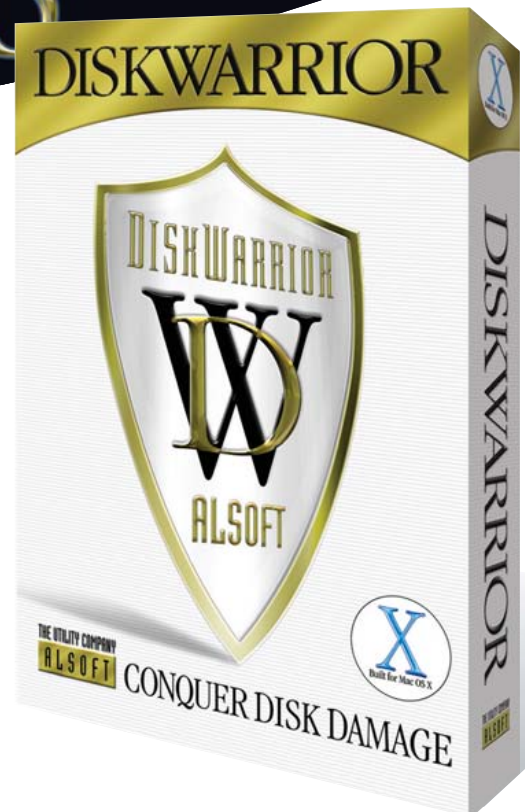
What's not to like about MailTags? Its main drawback is that it doesn't currently support IMAP mail. But for power users of POP mail, MailTags is a must-have. □

DAN FRAKES (www.danfrakes.com) is a senior editor at *Macworld*. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.

CONTINUES

begin to malfunction. Eventually, the malfunctions become so severe that the drive simply stops working. DiskWarrior can automatically test for hardware malfunctions, giving you the chance to back up your data before it's too late.

Be prepared. Don't wait until after you have a disk disaster to buy your copy of DiskWarrior. Bob LeVitus, aka Dr. Mac, said, "I feel naked without DiskWarrior." You can believe MacHome magazine when they said, "DiskWarrior is a quick, one-click solution to faster, more stable hard drives."



Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

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COLOR LASER PRINTER

★★★★ **Magicolor 2430 DL** (\$499), from Konica Minolta (www.konicaminolta.com):

The Magicolor 2430 DL is a capable networked color laser printer whose setup needs a bit of finessing. (The toner cartridges are preinstalled, but you need to remove some tape and clips.) However, the printer has a low price, accurate and saturated color prints, and unique features such as PictBridge camera printing. The 2430 DL is a great buy for a home office, a small work group, or anyone who doesn't need PostScript support. Beware: this printer is noisy—you'll definitely notice it in a small home office (macworld.com/0635).



INK-JET PHOTO PRINTER

★★★★½ **Stylus Photo R340** (\$200), from Epson (www.epson.com):

The Epson Stylus Photo R340 prints the best color photos in its class, and it reproduces shadow detail extremely well. It's a great choice for printing brilliant color photos, with or without the help of your computer. Also, this printer's ability to print to CDs and DVDs extends its usefulness—and its nice big LCD sweetens the deal. There is a downside, though: its black-and-white prints are subpar, which can result in a slight color-cast when printing (macworld.com/0948).



FIREWIRE DRIVES

DESKTOP DRIVE

★★★★½ **Black Series Triple Interface, 250GB** (\$240), from Iomega (www.iomega.com):

You can't go wrong with its speed, connection options, and low price per gigabyte. It can boot OS X via FireWire and includes Retrospect Express (macworld.com/0580).



ALSO RECOMMENDED:

★★★★½ **Mercury Elite-AL Pro 7,200 rpm FireWire 800/400 + USB2, 250GB** (\$230), from OWC (www.macsales.com):

This speedy drive can boot OS X via FireWire and includes Retrospect Express. It also has multiple connection options (macworld.com/0580).



PORTABLE DRIVE

★★★★ **Mercury On-the-Go 7,200 rpm 8MB, 60GB** (\$250), from OWC (www.macsales.com):

Loaded with useful utilities, this little drive has good connection options and an eye-catching design. It's also fast; it can boot OS X via FireWire and is powered by the FireWire bus. It includes Retrospect Express, other utilities, and a carrying case (macworld.com/0580).



ALSO RECOMMENDED:

★★★★ **ComboGB, 60GB** (\$250), from WiebeTech (www.wiebetech.com):

Though it comes at a relatively high cost per gigabyte, this drive is fast and has many connection options. It can boot OS X via FireWire and is powered by the FireWire bus (macworld.com/0580).






★★★★ **MiniMax 250GB** (\$250), from Iomega (www.iomega.com):

If you own a Mac mini, you should check out the MiniMax. It fits neatly under the mini, and its integrated USB and FireWire hub makes it a great companion to the littlest Mac (macworld.com/1159).






MACS

DESKTOP

Product	Processor	Display	Rating	More Information	Best Price ^A	Speedmark 4.5 Score ^B
	Intel Core Duo/1.83GHz	17 inches	★★★★	macworld.com/1153	\$1,099	202
	Intel Core Duo/2GHz	20 inches	★★★★	macworld.com/1154	\$1,449	214
	Intel Core Solo/1.5GHz	not included	★★★★	macworld.com/0909	\$589	123
	Intel Core Duo/1.66GHz	not included	★★★★	macworld.com/0911	\$780	144
	G5/dual-core 2GHz	not included	★★★★	macworld.com/0942	\$1,699	227
	G5/dual-core 2.3GHz	not included	★★★★	macworld.com/0945	\$2,149	254
	G5/quad-core 2.5GHz	not included	★★★★	macworld.com/1089	\$2,799	272

PORTABLE

	G4/1.33GHz	12 inches	★★★★	macworld.com/0705	\$899	101
	G4/1.42GHz	14 inches	★★★★	macworld.com/0706	\$1,179	109
	G4/1.5GHz	12 inches	★★★★	macworld.com/0399	\$1,270	not tested
	Intel Core Duo/1.83GHz	15 inches	★★★★	macworld.com/0912	\$1,999	152
	Intel Core Duo/2GHz	15 inches	★★★★	macworld.com/0910	\$2,499	161
	Intel Core Duo/2.16GHz	17 inches	★★★★	macworld.com/1383	\$2,799	193

^AFrom a PriceGrabber survey of retailers as of May 9, 2006. ^BSpeedmark 4.5 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.4 (Tiger). For information on Speedmark testing, go to www.macworld.com/speedmark.

FLATBED SCANNER

★★★★½ **CanoScan 9950F**
(\$400), from Canon
(www.canon.com):

The CanoScan 9950F offers improved scan quality and more-intuitive software controls. This model tops its predecessor, the 9900F, in almost every way—resolution, color accuracy, transparency, scan quality, and software interface (macworld.com/0188).



LCD MONITORS

23-INCH DISPLAY

★★★★½ **L2335** (\$1,599),
from Hewlett-Packard
(www.hp.com):

Along with its outstanding value, analog and digital connectors, ability to pivot to portrait mode, and adjustable height, the L2335 provides excellent video-in options and very good color fidelity and viewing angle (macworld.com/0278).



20-INCH DISPLAY

★★★★½ **MultiSync LCD2070NX** (\$799),
from NEC (www.necdisplay.com):

The MultiSync LCD2070NX is great for people who want a moderately priced 20-inch monitor that can display bright, accurate colors. It sports digital and analog inputs, an integrated USB 2.0 hub, and a thin bezel (macworld.com/0636).



17-INCH DISPLAY

★★★★ **SDM-HS75P**
(\$450), from Sony (www.sony.com):

Although it's short on bells and whistles—this display doesn't have built-in USB, speakers, or the ability to pivot—the HS75P is a good choice for people with limited desk space who are looking for a bright and shiny, well-designed display. It has very good color fidelity and text quality (macworld.com/0637).



DIGITAL CAMERAS

6-MEGAPIXEL DIGITAL SLR

★★★★½ **EOS Digital Rebel XT** (\$899; with lens, \$999), from Canon
(www.canon.com):

Canon defined this market with the original Digital Rebel, and the company keeps its lead with the EOS Digital Rebel XT. The camera's feature set, image quality, and price, combined with the vast assortment of available Canon mount lenses, make it the best choice in the sub-\$1,000 digital-SLR market (macworld.com/0535).



ADVANCED DIGITAL CAMERA

★★★★½ **PowerShot G6** (\$699),
from Canon
(www.canon.com):

This is a compact and powerful 7.1-megapixel digital camera that should appeal to advanced photographers. It captures very sharp pictures with little noise, and its remote lets you release the shutter, control the zoom, and operate menus (macworld.com/0917).



ALSO RECOMMENDED:

★★★★ **Lumix DMC-FZ30K** (\$700), from
Panasonic (www.panasonic.com):

This 8-megapixel camera is well suited to photographers who want manual controls. Its images look great when taken in good light, but noise is a problem at higher ISOs (macworld.com/1157).

DUAL-LAYER DVD BURNER

★★★★ **PX-716UF DVD±R/RW**
(\$239), from
Plextor (www.plextor.com):

The PX-716UF DVD±R/RW drive features flexible connectivity options; it burns 2.4×-rated dual-layer media at 4×; it has fast 16× burn speeds; and it has the fastest read speeds of the drives we've tested (macworld.com/0313).



IN THE LAB

Hardware Products We Tested This Month

8.2-MEGAPIXEL DIGITAL SLR

★★★★ **EOS 30D** (body
only, \$1,399), from
Canon (www.canon.com):

The EOS 30D is a welcome upgrade to an already great camera. The interface is a model of elegant simplicity: almost all the controls you'll use regularly are accessible via an external button. The larger LCD screen and new features such as spot metering will directly affect everyday shooting (macworld.com/1297).



7.5-MEGAPIXEL DIGITAL SLR

★★★★½ **Evolet E-330**
(\$1,000), from Olympus
(www.olympus.com):

The Olympus Evolet E-330 is a good camera, but its standout feature—the LCD viewfinder—is not that useful. Image quality is good, with precise detail and sharpness (macworld.com/1298).



6.1-MEGAPIXEL DIGITAL SLR

★★★ **ist DL** (with 18mm–
55mm lens kit, \$600),
from Pentax (www.pentax.com):

The Pentax ist DL is a good entry-level option for aspiring digital SLR shooters on a budget. While it's not long on features, the ist DL provides all of the automatic and manual controls that most photographers need, wrapped in a small body with a simple control layout. Unfortunately, the camera suffers from some image-quality problems (macworld.com/1299).



19-INCH DISPLAY

★★★★½ **SyncMaster 940BF** (\$479), from
Samsung (www.samsung.com):

The SyncMaster 940BF is a very good all-around LCD monitor, despite its limited viewing angle and inflexible ergonomic design. It lets you split the screen into specific zones to suit the type of content you're displaying (macworld.com/1300).



Cameras were tested in conjunction with the PC World Test Center.

Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we will update the list. For longer reviews of these products and for other product recommendations, go to macworld.com/reviews. All prices are as rated. For the best current prices, go to macworld.pricegrabber.com. All products were available as of May 9, 2006.

PROTE YOUR MAC

18 WAYS TO
SAFEGUARD
YOUR DATA
AND YOUR
PRIVACY
RIGHT NOW

ILLUSTRATIONS BY JOE ZEFF



e've said it before and we'll say it again: Your Mac is the safest personal computer on the market.

Even though we've had a couple of scares this year, there are still almost no Mac viruses. According to research done by Sophos (a maker of antivirus software), at press time there were only four known OS X viruses, compared with roughly 80,000 on Windows.

But let's face it—we live in a dangerous world, and not all of those dangers (especially those to your privacy) are platform-specific. Here's how to keep your personal information out of the wrong hands—and keep your Mac out of trouble.

ALSO INSIDE: **MAC ATTACKS** PAGE 51 **ANTIVIRAL ARMOR** PAGE 53

CT



WELCOME TO THE JUNGLE PAGE 54 **HACKER-PROOF PROTECTION** PAGE 55



Seriously Consider Using Antivirus Software

Is antivirus software worth the money and hassle? You might decide to take your chances and bet that malware authors will never target the Mac, but *seriously* consider installing and running antivirus software, especially if you engage in “risky” activities—browsing a variety of Web sites, exchanging files with other people via e-mail or servers, or downloading third-party software.

Choose the tool your company or college provides, or find an antivirus program on your own (see “Antiviral Armor”). (Skeptics should note that there’s a free, open-source option—ClamXav 1.0.3.) Just make sure to install the software, scan regularly, and update religiously. Outdated antivirus software is almost as bad as none at all.—MARK H. ANBINDER



Always Install Apple’s Security Updates

Half of the computer-security battle is staying up-to-date. Apple and makers of security programs do a good job of keeping their software updated to handle new problems, but if you don’t download and install updates, they won’t do you any good.

Mac OS X Security Updates include fixes not only for OS X but also for the various tools Apple provides with each Mac. For example, the first Security Update of 2006 fixed security flaws in the PHP scripting feature of the built-in Apache Web-server software that comes with every Mac. Before this patch, PHP (once activated) could have been used to run software on your Mac covertly.

Make sure your Mac’s Software Update preference pane is set so that your Mac checks regularly for new software. Checking weekly should be sufficient for most people. But if you often visit unknown Web sites or use personal file sharing or Web sharing, you should check daily.—MHA



Open Files Only from Known Sources

A *Trojan horse* claims to be one thing—risqué photos of a celebrity, for instance—but is in fact a program with



hidden plans for your computer. Double-click on it out of curiosity, and it leaps into action—with destructive, or at least annoying, results. This year brought the first OS X Trojan horse—Leap-A, also known as Oompa Loompa, which posed as photos of Apple’s upcoming OS release, Leopard (OS X 10.5). (For more info, see “Mac Attacks.”)

The easiest way to minimize your risk is to do what Windows users have done for years—regard unknown files with skepticism, especially unexpected e-mail attachments and odd files arriving via an instant-messaging program. If you’re not sure what a file is, and if it arrived without warning, ask the sender whether it’s legit. Also, get in the habit of downloading software only from known sources. If you’re worried that you might already have hidden malware on your computer, see “Intruder Alert!” at macworld.com/1316 for ways to check.—MHA



Watch for Macro Viruses in Your Office Documents

Office macros are scripts that let you simplify or automate repetitive actions, but

miscreants can also use them to spread misdeeds between computers and across platforms. A document from a Windows-using friend, for instance, could include a macro that turns *all* your Microsoft Word documents into locked templates.

Word and Excel now warn you, by default, when you try to open a document that contains macros (see “Good Macro, Bad Macro”). When you open a new document that contains embedded macros, whether it’s from a trusted source or not, check with the person who sent you the file to make sure the macros are OK.—MHA



Use a Standard Account for Everyday Work

When you install OS X or set up a new Mac, the first user account you create is an *administrator* account. This account has great power to alter your system. OS X requires that you enter your password to make most, but not all, changes to the system. The exceptions are what tricky malware creators can exploit.

If you *are* logged in to the administrator account, the recent Leap-A Trojan

horse, for example, could install itself in the System folder, affecting all your Mac's users and possibly infecting many applications. If you're logged in to a *standard* account, Leap-A could affect only that account and applications that you have installed by dragging them into the Applications folder.

So create a standard user account in the Accounts preference pane (don't enable the Allow User To Administer This Computer option), and use it for your day-to-day work. You'll have to enter your administrator user name and password from time to time—when installing software, for instance—but you'll have a safety net.—KIRK McELHEARN



Turn Off Automatic Login

When you use OS X's Automatic Login feature, there's no need to select your user name and enter your password in the Login window when you start up your Mac. That's convenient at home, but if you work with a laptop or a publicly accessible computer in an office, it can expose all your personal documents to anyone who presses the power button.

To turn off this feature, go to the Accounts preference pane and click on Login Options. (If the button is dimmed, first click on the lock icon and enter your administrator password.) Deselect the Automatically Log In As *User Name* option.—KM



Lock Your Screen When You Step Away

If you require a password at login, your Mac is protected when you log out or turn it off, but what about when you just step

away? When you go to lunch, anyone can come by your desk, press a key to wake your computer, and access your files. Prevent this by requiring a password when anyone turns off the screen saver or wakes your Mac. In the Security preference pane, select Require Password To Wake This Computer From Sleep Or Screen Saver. For more ways to lock your screen, see macworld.com/1248.—KM



Give Your Keychain Its Own Password

OS X includes a nifty utility that stores all your passwords for applications, servers, and Web sites. Your *Keychain* is your central repository for passwords; it unlocks as soon as you log in to your Mac. Unfortunately, this means that anyone who can access your Mac will be able to open your password-protected items. If you use Safari's AutoFill feature, that could include your bank account, your Amazon account, your .Mac account, and more.

Solve this by giving the Keychain a password that's *different* from your user-account password. Open Keychain Access (/Applications/Utilities) and select Edit: Change Password For Keychain "*User Name*". (In some cases, you might see the word *Login* instead of your user name.) In the Current Password text field, type your login password. Type a new password in the New Password field and again in the Verify field. Click on the key icon next to the New Password field to bring up the Password Assistant window. Here you can test how secure your password is and get ideas for better ones. In the Type menu, choose Memorable, Letters And Numbers, Numbers Only, Random, or FIPS-181 Compliant to get suggestions (see "What's the Password?").—KM



Lock the Keychain When It's Not in Use

Once your Keychain is unlocked, it usually stays that way until you log out or shut down your Mac. For more protection, set the Keychain to lock when it's inactive. Open Keychain Access and select Edit: Change Settings For Keychain "*User Name*". (In some cases, you might see the word *Login* instead of your user name.) In the Keychain Settings window, select the Lock After *Number Minutes Of Inactivity* option, and

MAC ATTACKS

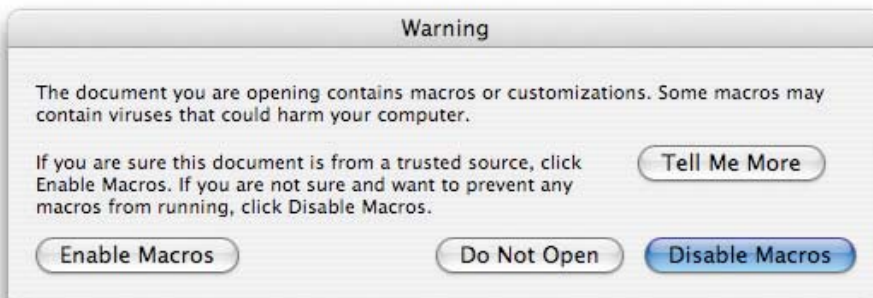


fter years of quiet on the home front, Mac users have recently had to defend against a few security threats. The number is still so low as to make a Windows user laugh (or cry), but the attacks are a good reminder of modern computing's risks.

> **Leap-A, or Oompa Loompa (February 2006)** Even the mainstream press talked about the first "real" Trojan horse for the Mac. Disguised as photos of the next Mac OS, Leap-A could, once clicked on, spread itself to other users through iChat. Leap-A was more a proof-of-concept than a serious risk (see macworld.com/1302). Still, it raised awareness about security gaps in OS X and demonstrated the need for Mac users to be skeptical of unexpected files.

> **Inqtana-A (February 2006)** Around the time that Leap-A arrived, the Inqtana-A worm appeared. Inqtana-A used a vulnerability in Bluetooth to replicate from one Mac to another (see macworld.com/1303). However, Apple had already patched this vulnerability in May 2005, so only un-updated computers within 30 feet of infected computers were actually at risk.

> **Zaptastic (May 2005)** An anonymous author revealed security gaps in Tiger's widgets with this proof-of-concept. By default, Web pages could automatically install widgets, with potentially disastrous results (see macworld.com/0597). Apple patched this hole pretty quickly, and users now get an alert whenever a Web page attempts to install a widget.—KIRK McELHEARN



Good Macro, Bad Macro Microsoft Word warns you whenever you open a document that contains macros. Note that not all macros are bad; before you enable the macros, just ask the person who sent you the file whether it's supposed to contain them.

choose a number of minutes. Also choose the Lock When Sleeping option.

If you prefer manual control, select Keychain Access: Preferences, and choose the Show Status In Menu Bar option. A small lock icon will appear in your Mac's menu bar. This icon shows you whether your Keychain is locked. You can also lock and unlock it from this menu.—KM

SECURITY TERMS EXPLAINED

Zombies and worms and bots—oh my! Most Mac users haven't had a reason to be familiar with the security world's colorful terminology. Here's a primer.—MARK H. ANBINDER

Back door	A means of accessing your computer or protected data without your knowledge or permission.
Bot	A small program designed to mimic a person's behavior—for instance, by sending messages via chat software.
Keylogger	A program, usually hidden, that records everything you type. Its purpose is to capture your passwords, credit card numbers, Web passwords, and other private info and send them back to someone.
Malware	A general-purpose term for all software written for nefarious reasons.
Phishing	The process of using counterfeit e-mail messages or Web pages to trick people into providing user names, passwords, and more.
Phone home	What keyloggers and other spyware programs running on your computer do when it's time to transmit your private info to the malware's author.
Spyware	Hidden software that collects your private information—either by keylogging or by accessing your documents—and then phones home.
Trojan horse	Malware that pretends to be something else—an image or a software program. It can't do anything to your computer until you activate it.
Virus	Malware that can spread itself by infecting applications, operating-system files, or documents on your computer.
Worm	Malware that can spread itself without touching existing applications. Usually it's a stand-alone piece of code.
Zombie	A computer that has been hijacked, without the owner's knowledge, to perform tasks for someone else.



10 Encrypt Important Files

If you have sensitive files on your Mac—especially a laptop Mac—consider protecting them with encryption. No one can read or copy your encrypted files—even if they hack into your Mac or remove your hard drive. (To ease the pain of a stolen laptop, see “When Your Laptop Goes Missing” at macworld.com/1317.)

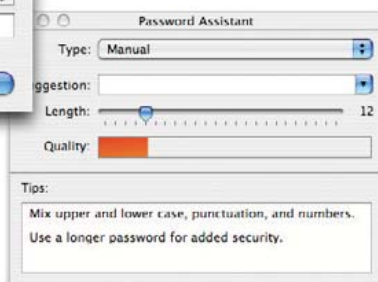
Protect a Few Files If you have only a handful of files to protect, consider creating an encrypted disk image and adding those important files—your Quicken file, for example—to it. (See “Disk Utility's Hidden Talents,” page 68, for instructions.) Mount this disk image and enter your password when you need to work with the files. Eject the disk image when you're done. That's it.

Protect Your Entire User Folder If your user folder is full of confidential documents—say, all your clients' tax records or the secret plans for your new invention—consider using OS X's FileVault feature instead. After you activate FileVault, all you need to do is enter your login password to begin your work—then you can open files, work on them, and save changes without noticing a thing. Close a file, and it's automatically encrypted again.

Open the Security preference pane and click on Set Master Password. In the sheet that appears, fill out the password fields and click on OK. Then click on Turn On FileVault. (It might take quite a while to encrypt your files.) Conveniently, FileVault's master password also works as a kind of backup account password—you can use it to unlock your account or any other account on your Mac. But be careful: forget your master password, and your files will be completely inaccessible.—KM



What's the Password? Your Keychain stores all your passwords and, by default, unlocks when you log in to your Mac. Beef up its protection by giving it a password of its own, and use Password Assistant to make sure you pick a good one.



11 Use a Firewall

Do you connect to the Internet with an always-on connection? If so, one of the easiest things you can do to enhance your Mac's security is to turn on Apple's built-in software *firewall*. A firewall is a tool—either hardware or software—that prevents unauthorized access to a computer or a network.

Turning the firewall on is an absolute necessity if your Mac is plugged *directly* into your cable or DSL modem (as opposed to being connected via an AirPort or some other kind of router). If you plug your computer directly into your modem, it has a public Internet address that makes it potentially visible to *everyone*.

To fire up your firewall, open the Sharing preference pane. Click on the Firewall tab, click on Start, and then click on the Advanced button.

In the sheet that appears, select the Enable Stealth Mode option. This makes your computer almost invisible on the Internet, so hackers will be less likely to attack. OS X's built-in firewall will do the job for most people. See “Hacker-Proof Protection” for add-on options.—JEFFERY BATTERSBY



12 Protect Your Wireless Network with WPA

If your wireless network doesn't use encryption, it's easy for ne'er-do-wells to intercept data passing through the air. To protect your passwords, e-mails, and so on, turn on encryption and make sure you're using WPA (Wi-Fi Protected Access) or WPA2. An early form of wire-

ANTIVIRAL ARMOR

As the Mac becomes more popular, its OS could well start to attract the attention of malicious virus writers. Installing antivirus software now will not only protect your Mac but also prevent you from passing along Windows-only viruses to your Windows-using friends and colleagues via e-mail attachments or Office documents.

We've taken a close look at three major Mac antivirus programs: Intego's VirusBarrier X4, the open-source ClamXav 1.0.3, and Symantec's Norton AntiVirus 10.1 (see "Antivirus Software Compared" for details). (Two other Mac antivirus apps, Sophos AntiVirus [macworld.com/1304] and McAfee Virex [macworld.com/1305] are now aimed primarily at business buyers who need to protect fleets of Macs).

Defending the Home Front

Like security guards making their rounds, all three programs scan your Mac looking for anomalies. Each can scan built-in hard drives, of course. All three can also scan CDs, DVDs, FireWire hard drives, and other removable media as soon as they're mounted. All but ClamXav will scan incoming e-mail attachments, and all but ClamXav will scan your memory to make sure a piece of malware isn't already running.

Test Run To find out how well these programs perform, we loaded a test machine with the standard EICAR antivirus test file (see macworld.com/1306 for more information), the Hacker Defender Trojan horse installer, and Leap-A; we then installed our three antivirus apps one at a time. All three successfully detected and quarantined the test files on our drive.

Speed Matters More-dramatic differences cropped up when we took out our stopwatches. We asked each program to scan an Applications folder containing 14GB of applications and compressed files, and a 900MB Documents folder holding a mix of Microsoft Office and Apple iWork files. VirusBarrier was by far the fastest, taking 13 minutes to scan the Applications folder and 2 minutes to scan Documents. Norton AntiVirus took roughly four times as long, and ClamXav roughly eight times as long.

When There's a Virus Finally, there's the question of how each app reacts when it finds a virus. Ideally, the program should be able to repair the infected file. If that's not possible, the program should be able to move the file to a quarantine folder or delete it altogether. Each of these programs gives you plenty of options for handling infected files. Norton AntiVirus gets extra points for offering by far the best information about the infections.

Macworld's Buying Advice

Although all of these programs will get the job done, we like Intego's VirusBarrier best for its scanning speed and its well-integrated Mac features. It gives you a contextual menu in the Finder, and a Dashboard widget updates you on the progress of scans and virus updates. It integrates with iCal and has full drag-and-drop support.

Symantec's Norton AntiVirus is a close second, thanks to its extensive virus information and its strong handling of Windows viruses. If price is a concern, ClamXav will get the job done for free, but you'll have to deal with its nonstandard interface and some tricky operational issues.—ROB GRIFFITHS



ANTIVIRUS SOFTWARE COMPARED

Company	Product	Rating	Price	Virus-Update Subscription (Annual)	Scanning Time (in Minutes)		Pros	Cons	More Info
					Applications Folder (14GB)	Documents Folder (900MB)			
Intego	VirusBarrier X4	★★★★	\$70	\$30	13	2	Amazingly fast; good OS X integration; easy to use.	Expensive; some interface quirks.	macworld.com/1309
open source	ClamXav 1.0.3	★★★★	free	free	105	12	Frequent updates; free.	Slow; doesn't scan incoming e-mail or active memory; minimal information about viruses.	macworld.com/1307
Symantec	Norton AntiVirus 10.1	★★★★	\$50	\$15	53	7	Reasonably fast; excellent virus information; easy to use.	Installs components all over your system.	macworld.com/1308

less encryption, WEP (Wired Equivalent Privacy), used weak *algorithms*—the mathematical formulas that determine how data is concealed. (A team of FBI agents cracked a 128-bit WEP key in three minutes at an Information Systems Security Association meeting last year. Read more at macworld.com/1290.)

To use WPA Personal (the home version), it's best to have OS X 10.3.9 or higher. You also need an AirPort or AirPort Extreme card and an AirPort Extreme Base Station or an AirPort Express. (The original AirPort Base Station can't be upgraded for WPA support.) Many other base stations, from companies including Linksys and Buffalo, support WPA, too.

Update Your Base Station First, confirm that your base station is up-to-date, by launching AirPort Admin Utility (/Applications/Utilities) and selecting your base station. If the firmware version number is less than 5.7 (Extreme) or 6.3 (Express), visit Apple's AirPort Support page at macworld.com/1291, download the newest firmware for your device, and follow the instructions for upgrading.

Lock It Down Next, in AirPort Admin Utility, select the AirPort tab. Click on the Change Wireless Security button; then select WPA Personal from the Wireless Security pop-up menu. In the Encryption Type pop-up menu, choose WPA Only or WPA And WPA2 (see "Protect the Air-

waves"). (If you choose WPA And WPA2, Macs with original AirPort Cards might not be able to connect.)

Enter a password—preferably something that's about 20 characters long and isn't entirely composed of words found in a dictionary. Enter the password again to verify your typing and click on OK. Click on Update to apply the settings; the base station will reboot.—GLENN FLEISHMAN



Encrypt Your Wireless Hotspot Sessions

Millions of people use public Wi-Fi hotspots, which typically lack any useful

WELCOME TO THE JUNGLE: WINDOWS SECURITY FOR MAC USERS

The conventional wisdom is that Macs are protected from most viral computer attacks, while PCs exist in a fearsome wilderness full of dangers. But if you use Apple's Boot Camp public beta software to install and run Windows on your Intel-based Mac, you leave safe territory.

In the past, if you needed to run some Windows programs, your only choice was Microsoft's \$249 Virtual PC (●●●●; macworld.com/1115). This emulator offers you some protection from network-borne dangers by effectively running Windows in a box within your Mac. If you use Boot Camp, you're more exposed, and you *must* follow a strict security regimen.

Follow the Windows Way To protect a Windows computer, you need to keep the operating system up-to-date and patched, use a firewall, and make sure you have current antivirus software. You can use Microsoft's convenient Windows Update feature (similar to Software Update on your Mac) to stay current on patches and bug fixes.

Windows XP SP2's built-in firewall feature addresses only incoming connection attempts (as does Mac OS X's built-in firewall). Heavy Windows users can protect themselves from malware such as keyloggers by using software that monitors outgoing connections as well, such as the free ZoneAlarm, from Zone Labs

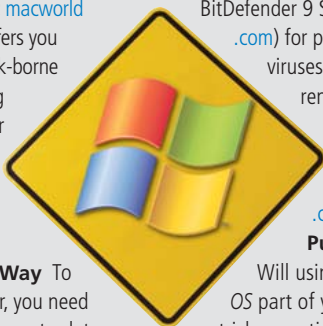
(www.zonelabs.com), or a more full-featured firewall such as Zone Labs' \$50 ZoneAlarm Pro 6.0 or Symantec's \$67 Symantec Client Firewall (www.symantec.com).

Constant vigilance is essential in the Windows world. AV-Test, a German security and testing firm, says that 70 to 100 new threats are discovered every day. Our sister publication *PC World* recommends BitDefender's \$30

BitDefender 9 Standard (www.bitdefender.com) for protection against Windows viruses. You'll need to pay a \$15 renewal fee each year to keep your virus definitions up-to-date (for more information, see macworld.com/1294).

Putting Mac OS at Risk?

Will using Boot Camp put the Mac OS part of your machine at risk? That's a tricky question. When you're running OS X, even on an Intel-based Mac, you're not susceptible to Windows-based viruses. Also, by default, Windows XP can't see Mac hard-drive volumes, so a rampaging Windows virus that deletes files on your Windows partition won't be able to see your Mac files. However, if you install a program such as Mediafour's \$50 MacDrive (www.mediafour.com) so you can exchange files between your Mac and Windows partitions, your files may become vulnerable to a virus that deletes files. —MARK H. ANBINDER



protection for data. Unless the hotspot network uses a corporate form of Wi-Fi encryption—like the one offered optionally by T-Mobile HotSpots—a person using packet-sniffing software could grab your passwords, e-mail messages, or info as it flies through the air.

Protect E-mail Most Mac e-mail programs include support for SSL/TLS (Secure Sockets Layer/Transport Layer Security) encryption, which hides data as it travels between your browser and your ISP's servers. (To turn SSL/TLS encryption on in Mail, go to Mail: Preferences, click on Accounts, select the account you want to protect, go to the Advanced tab, and enable the Use SSL option.)

But you also need an Internet service

provider or a mail host that offers this type of secure connection—such as .Mac (\$100 per year; www.mac.com) or FastMail.fm (\$20 per year; www.fastmail.fm). If you don't want to slog through configuration details, PGP's \$99 PGP Desktop Home 9 (●●●●; macworld.com/0719) offers a unique option. It does the work for you: intercepting your mail connections, determining whether your ISP handles secure e-mail, and setting up the correct connection.

Protect FTP Sessions If you need to copy files back to an office server while you're on the road, consider encrypting your FTP sessions using Secure FTP (SFTP). Many service providers now offer SFTP, and most Mac FTP programs include SFTP support.

Protect Your Surfing Banks and commerce sites already use SSL to protect your financial information when you access their Web sites. But thieves can try to get around this when you're at a hotspot, by simulating the real hotspot with their laptop (creating an "evil twin") or misleading your computer into passing data to the wrong site (Address Resolution Protocol [ARP] "poisoning").

Enter your user name and password only on pages that are protected by SSL and have the *exact* domain name you recognize. A few sites let you enter your login details on an unprotected page and then redirect you to a secure site. That's a ticket to disaster if a hotspot villain is nearby.

You can bypass evil twins and ARP poisoners while also enjoying encrypted browsing of all pages by using a *secure proxy*, which is typically layered on top of an *anonymizer*. Anonymizers are designed to keep your surfing *habits* private; a secure proxy keeps the content of your surfing private, too. A secure proxy requires that you configure your computer to send its Web requests over a secure connection to a remote server. The server acts as an intermediary as you visit Web sites.

Only Secure-Tunnel (www.secure-tunnel.com) seems to support OS X, in its case via Safari and other browsers' proxy settings. The service's simplest option—the \$35-per-year Silver package—is Web based and allows anonymous, encrypted surfing.

Protect Everything If you do a lot of work on-the-go, consider securing *all* your wireless hotspot activity at once by using a Virtual Private Network (VPN) connection. VPN software captures all the data flowing out of your programs and then puts that data into a secure tunnel that extends from the virtual network, through the local net-



Protect the Airwaves To safeguard your wireless network you must turn on *encryption*. An early form of wireless encryption, Wired Equivalent Privacy (WEP), was easy to crack, so make sure to use WPA (Wi-Fi Protected Access) or WPA2 instead.

work, out to the Internet. Check out HotSpotVPN (starting at \$9 per month; www.hotspotvpn.com), personalVPN (\$40 per year; www.witopia.net), and PublicVPN (\$60 per year; www.publicvpn.com).—GF



Don't Click on Links in Unsolicited E-mail Messages

While spam may be the scourge of the Internet, *phishing* is its biggest scam. You undoubtedly receive e-mails—purportedly from banks, eBay, PayPal, Amazon.com,

and others—asking you to confirm your account or re-enter your credit card information. Don't click on those links.

Legitimate banks and online vendors will *never* send you an e-mail asking you to confirm account information in this manner. Instead, these links take you to counterfeit Web sites that look exactly like legitimate sites but send your account information or credit card numbers to organized crime groups or petty scammers.

When in doubt, check the supposed senders' Web sites: most of them track bogus messages like these. You can also

check the e-mail message's link itself to see whether it leads where it says it does. If you're running OS X 10.4, hover over the link and the true URL will appear. (For more tips, see macworld.com/1287).—KM



Protect Sensitive E-mail from Prying Eyes

It's relatively easy to *sniff*—or capture—Internet data, since it goes over many unprotected servers. And anyone listening in on the telephone line running out of

HACKER-PROOF PROTECTION



One sign of OS X's overall security savvy is that it has its own built-in firewall, which is pretty good. But there are many other firewall add-on apps for the Mac, including Brian Hill's Flying Buttress 1.4, Intego's NetBarrier X4, Open Door Networks' DoorStop X Security Suite, Sustainable Softworks' IPNetSentryX 1.3.1, and Symantec's Norton Personal Firewall 3.0.3 (see "Firewall Software Compared" for details).

Guarding the Gates

How safe will these apps keep your Mac? In blocking traffic, the differences between these products are razor-thin. They all block bad network traffic and protect your Mac just as they should. But there are two areas where a couple of these apps fall short.

Hackers looking for a computer to exploit may ping yours to see if it'll reply; if it does, the answer lets them know what operating system your computer is running—an excellent starting point for their nefarious games. In our testing, Apple's built-in firewall, Flying Buttress, and Norton all spilled the beans about which OS our test system used.

The other hole we found in some of these tools is that basic firewalls simply allow or block traffic passing through your network ports. But some programs offer another level of protection—intrusion detection. They examine incoming traffic to see whether it's doing anything unusual and warn you if they detect anything suspicious. IPNetSentryX and NetBarrier are the only programs we looked at that have intrusion-detection tools.

While these programs are similarly skilled in protecting your Mac, they differ in ease of use. While each one lets you specify which network ports you want to block or leave open, NetBarrier and Norton make it particularly simple; IPNetSen-

FIREWALL SOFTWARE COMPARED

Company	Product	Rating	Price	Pros	Cons	More Info
Apple	Mac OS X Firewall	★★★★	free ^A	Already part of Mac OS; stealth mode and logging tools; can block UDP traffic.	Advanced configuration requires Terminal; reveals OS; confusing logs.	macworld.com/1390
Brian Hill	Flying Buttress 1.4	★★★★	\$25	GUI access to features otherwise available through Terminal; syntax checker.	Limited support; poor documentation; some configuration requires advanced knowledge; reveals OS.	macworld.com/1312
Intego	NetBarrier X4	★★★★	\$70	Intrusion detection; anti-spyware tools; cookie management; monitoring tools; simple setup; excellent documentation.	Default configurations are either too permissive or too restrictive; customization requires some networking knowledge.	macworld.com/1313
Open Door Networks	DoorStop X Security Suite	★★★★	\$80	Excellent documentation and support; provides detailed information about logs and security instruction.	Default settings too stringent; doesn't warn against locking down services that you might need.	macworld.com/1315
Sustainable Softworks	IPNetSentryX 1.3.1	★★★★	\$60	Intrusion detection; highly configurable; excellent logging.	Requires significant technical knowledge to manage correctly.	macworld.com/1310
Symantec	Norton Personal Firewall 3.0.3	★★★★	\$50	Simple setup and configuration; recognizes applications that require network access; easy to add new port or service security.	Stealth mode reveals OS.	macworld.com/1314

^A Comes with Mac OS X.

tryX, on the other hand, requires some advanced network knowledge to set up properly.

And each of these apps provides some kind of reporting system, from basic text documents that log access attempts to e-mailed notifications.

Macworld's Buying Advice

When it comes to keeping snoopers out of your Mac, OS X's firewall is all most users really need. It's safe, secure, and free. But its interface is awfully basic; for any advanced configuration, you'll have to head to Terminal.

Intego's NetBarrier X4 gets our nod as the best OS X firewall, thanks to its ease of configuration, boatload of useful features, and excel-

lent documentation. Norton Personal Firewall and DoorStop X Security Suite are also excellent options but offer fewer features. I personally like (and use) Flying Buttress. But its lack of consistent support and its limited documentation make it a poor choice for the average user.

IPNetSentryX is in a class all its own. It's an intrusion-detection program that's really designed for network professionals who know what to look for on their networks and who have a thorough knowledge of TCP, UDP, and IP. If you're wondering what I'm talking about, IPNetSentryX is not for you. But if you've just begun to salivate, it will be a powerful addition to your network security toolbox.—JEFFERY BATTERSBY

PROTECT YOUR MAC

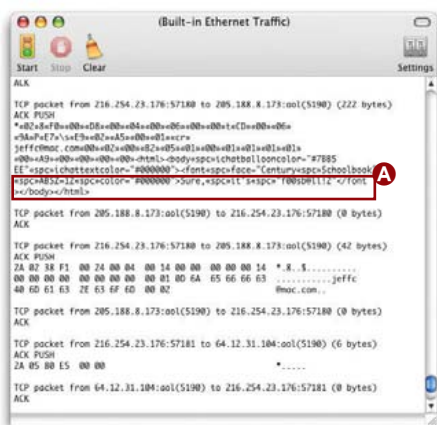
your home, office, or ISP can intercept your files. You probably couldn't care less if the data you're sending consists mainly of photos of your cat, but you have reason to be concerned if you're sending top-secret information, or if you work with private health, financial, or legal records.

There are a few ways to send files via e-mail or the Internet in total security. You can purchase an encryption program such as PGP's versatile PGP Desktop Home to use with your e-mail client. You can use a Web-based encrypted e-mail service. (Most charge a modest monthly or yearly fee; see a list at macworld.com/1285.) If your recipients use Macs, you can also just send files as an encrypted disk image. Don't send the password with the disk image: give it to the recipient by telephone, fax, or iChat.—KM

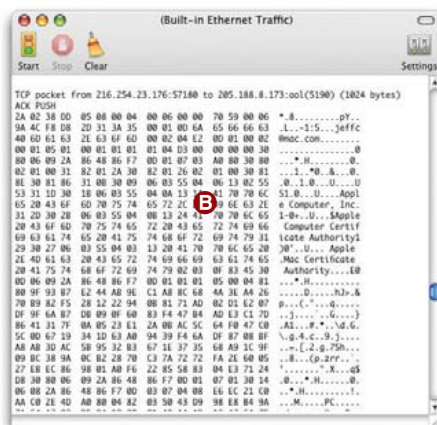


Practice Private Surfing

Search-engine records, cookies, Web bugs, and a host of other elements all make it possible for Webmasters, your boss, or marketers to see what you've been perusing.



Idle Chatter When you send iChat messages in the clear, anyone on the same network, wired or wireless, can use a tool as simple as Stairways Software's Interarchy to eavesdrop **A**. But if you use .Mac-based encryption, hackers will be able to read only your chat partner's IM handle **B**.



Some Web sites require registration so they can follow your every click; others simply use cookies to track your page views. It helps to delete your browser's cache history on your end. (Programs such as Allume Systems' \$30 Internet Cleanup 3 [<http://www.allume.com>; macworld.com/0769] remove that and more automatically.) But server records remain.

You don't have to be avoiding the

paparazzi or the law to want some privacy online. People feel strongly about keeping many legitimate activities to themselves. Google's recent battle with the U.S. Department of Justice highlighted the potential for search engines' online databases to become surveillance tools in the United States. The government subpoenaed data including Google users' search



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queries, leading privacy advocates to fear further demands for IP addresses leading back to individual users.

If all that leaves you leery, consider using a secure proxy or a simpler *anonymizer* when you want to surf privately. Many Web sites act as anonymizers, some for a subscription fee (see a list at macworld.com/1285). To elude registration on Web sites, check out BugMeNot (www.bugmenot.com), which stores a database of shared user names and passwords that you can use instead of creating your own.—KM



17 Keep Your Chats to Yourself

Apple's iChat is a quick, easy way to correspond with other people. But be aware that if you use a hotspot or a campus Ethernet network, others on the network might be able to tap your talk.

Apple added a Secure iChat feature to the .Mac service in October 2005. To use Secure iChat, you *and* the person you want to chat with must both have at least OS X 10.4.3 (which includes iChat AV 3.1) and

a .Mac membership. Secure iChat works only for one-on-one text chats. If you meet all those criteria, select iChat: Preferences, choose your .Mac chat account, and click on the Security tab. If you see the message "iChat encryption is enabled" at the bottom of the window, you're set. If you see "iChat can enable encryption," click on the Encrypt button.

People without .Mac accounts have other options. For \$40, you can get the starter bundle of two licenses for Intego's ChatBarrier X3 (★★★★; macworld.com/1292)—enough for you and a companion to chat securely. You may already be considering PGP Desktop Home 9 for its many encryption skills; it can also secure chats between two users who both have the software installed.—GF



18 Back Up Your Files

Whether your Mac catches a virus, your network gets hacked, or you lose your files or your laptop, only regular backups will ensure that you don't lose anything impor-

ON THE WEB

> Intruder Alert!

4 Ways to Track Down Hidden Mac Malware
macworld.com/1316

> When Your Laptop Goes Missing

5 Steps to Take to Prepare for the Worst
macworld.com/1317

> Before You Get Rid of an Old Mac

3 Things You Should Do to Protect Your Data
macworld.com/1318

tant. Check out "Back Up to Stay Ahead" at macworld.com/1288 for general guidelines. And read our latest reviews of backup software, including CMS Products' \$79 BounceBack Pro (★★★★; macworld.com/0816) and EMC Insignia's \$129 Retrospect 6 (★★★★; macworld.com/0587).—KM

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THE

WEEKEND WEB SITE

Photographs by Peter Belanger By Chuck Toporek

Online Publishing Made **SIMPLE** with **iLife '06**

You've dreamed of having your own Web site—a place where you can share your photos, movies, and life events with far-flung friends and family. But who has the time to learn how all the pieces fit together? Now, thanks to iWeb, the Web-design software included with Apple's iLife '06 suite (\$79; www.apple.com), setting up your own Web page—including blogs, podcasts, photo slide shows, and embedded movies—has never been simpler. In fact, you don't need to write a single line of HTML, CSS, or JavaScript code. All you need is a free weekend and this handy guide.



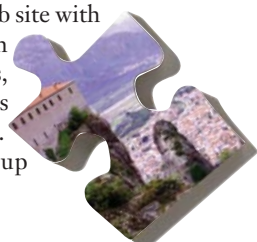
purposes. For example, the Blog page includes technology that archives each post, updates a summary page with the new content, and then syndicates your post for RSS readers (software that monitors blogs for new content—this is how others stay up-to-date with your blog). The downside to this specialization is that you'll need to make sure you're using the right page for your type of content (for a breakdown of the differences between page types, see "Choosing a Page Style").

You can choose any template for your first page. Just keep in mind that once you choose a theme, you can't switch to a new theme without rebuilding the page from scratch. You can, however, mix and match themes within your Web site—using the Travel theme for your Blog page and the Black theme for your Photos page, for example.

Once you've made your page selection, click on the Choose button to add that page to your new Web site.

Rename the Page When you add a new page to your Web site, two things immediately happen: an icon of the page appears in the Site Organizer column, and a link to the page appears at the top of every page in your Web site (see "Site at a Glance"). Visitors will use these links to navigate between the different pages in your Web site. If you'd like to make your navigation buttons a little less generic, double-click on a page name in the Site Organizer and type something different. When you press the return key, the navigation links along the top of your Web pages will update to reflect the new page title.

Add More Pages A Web site with just one page isn't much to look at. In most cases, you'll want several pages for people to explore. I recommend setting up



Step 1

Get Organized

Before you start building your new Web site, take a moment to collect and organize your material.

Collect Your Photos If you have a lot of photos in your iPhoto library, you can save considerable time by placing the images for your Web site into separate iPhoto albums. iWeb supports most graphic file formats, including JPEG, GIF, TIFF, PNG, and even Raw files (which get converted into JPEGs). You may also want to take a moment to give your photos descriptive titles. iWeb uses these titles as the default captions when creating photo galleries.

Trim Movies If you're planning to place videos on your Web site, take a moment to make sure they are in the correct for-

mat. iWeb supports videos saved in the MOV, AVI, and MP4 formats. Just keep in mind that the longer your movie is, the longer it'll take viewers to download. To compress your movies, open them in iMovie HD, choose Share: QuickTime, and select Web from the Compress Movie For pull-down menu. I was able to trim a 2.8MB file to a paltry 244K.

Step 2

Set Up Your Web Pages

With your media in order, you're ready to begin. Make sure you've installed the latest version of iWeb (version 1.1 at press time).

Choose Your Style When you launch iWeb for the first time, you'll see a dialog box with style options for your first Web page. Using the scroll bar on the left, select one of iWeb's 18 template themes. Each theme includes seven different page styles. Some page styles are designed for specific



THE WEEKEND WEB SITE

those pages now. This will help you spot potential trouble before you've spent a lot of time customizing individual pages. For example, you may discover that you have too many links cluttering your navigation bar. If so, shorten the titles, or create sub-menu pages (see "Relief for Overcrowded Navigation Bars").

To add new pages to your site, click on the plus-sign (+) button beneath the Site

Organizer or select File: New Page. Note that the order in which your pages appear in the Site Organizer determines the order of the navigational links at the top of your Web pages. To adjust the link order, simply click on a page in the Site Organizer and drag it to a new position in the page hierarchy.

If you design a page just as you like and then decide that you want to repeat the

customized layout for a different page, you can select the page in the Site Organizer and press ⌘-D to duplicate it.

Hide Pages Want to put your resume online but don't want your boss to find it? Select the page in the Site Organizer, open the Pages section of the Inspector pane, and then deselect the Include Page In Navigation Menu option. iWeb will still publish the page, but the page won't show up in the navigation menu. If you publish via .Mac, you can password-protect the page for additional security.



Add Text to Pages

With your pages in order, you're ready to start customizing. iWeb's page templates include blocks of placeholder text. To replace that text with your own, just click in the text area and start typing (you can also copy and paste text from a Microsoft Word document or another text editor).

To add a new text block, click on the Text button at the bottom of iWeb's window. An empty text box appears in the center of the page. To move the box somewhere else, click on it and drag it to a new location. To alter its size or shape, drag one of its selection handles (the white squares around the edges of the box) to the desired position.



Site at a Glance Each time you add a new page to your Web site, iWeb adds that page to the Site Organizer **A** and places a link to it **B** at the top of every Web page in your site. To rename these links or change their order, simply adjust the pages in the Site Organizer.

Choosing a Page Style

Not sure what the difference is between various iWeb pages? Here's a breakdown of what you can—and can't—do with each page.



Welcome

This page is designed to be the first page people see when they come to your site. Use this page to tell visitors a little bit about what they might find on your site, but keep it short. You want the page to load quickly.

Blank

This page lets you start with a clean slate, while still maintaining the look of your theme.

About Me

This page typically includes places for links to your favorite Web sites, iTunes playlists, and photo albums.



Photos

This page creates photo galleries. iWeb places photos in a grid that you can arrange into two or three columns. To adjust how much caption information appears, open the Graphic tab in the Inspector pane and adjust the Caption Height slider. Use the scroll bar under the Style heading to choose a different photo frame for your images. Oddly, you can't add a link to a photocast on the Photos pages (see "Another Way to Share Photos"). For that, you'll need a Blog or Podcast page.

Customize Text Styles To change text formatting or color, open the Inspector pane and click on the Text tab. To choose a different font style or size, click on the Fonts icon at the bottom of the iWeb window.

Getting a block of text styled just the way you like can take a bit of time. Luckily, once you've found the right look, you can quickly apply that style to other text on your site. Simply select the text block and choose Format: Copy Graphic Style (this option copies the style but not the actual text). Then select another text box and choose Format: Paste Graphic Style.

Check Your Spelling Once you've finished adding text to your site, take a moment to check your work. Go to Edit: Spelling: Spelling to check for misspelled words. If iWeb doesn't recognize a correctly spelled word, it will identify it as an error. In that case, click on the Learn button to add the word to iWeb's dictionary. The next time that word comes up, iWeb will recognize it and skip right on past.



Add Photos

In addition to providing fake text, iWeb's templates also include placeholder photos, which you can replace with your own. But don't feel confined by these placeholder

ers—you can put images anywhere you want on the page.

Import Photos You can access photos in iWeb via the Media Browser's Photos pane (View: Show Media Browser). The browser displays your entire iPhoto library, as well as any albums you've set up. You can also add photos stored in a folder outside iPhoto by dragging the folder from the Finder to the Media Browser's Photos section.

To add an image to your page, drag it from the browser to the appropriate spot. If you drag an image on top of an existing image, iWeb replaces the old image with the new one. You can also drag photos directly to iWeb from a Finder window.

Resize It To resize an image, select it and then drag one of the white selection handles to the desired size. By default, iWeb will maintain the image's proportions. For more-precise results, open the Inspector pane, click on the Metrics tab, and adjust the Width or Height settings. But keep in mind that larger images take longer to download in a Web browser.

Rotate You can place an image at an angle by holding down the ⌘ key as you drag one of the image's corners into position (or by using the Rotate dial in the Metrics tab). To rotate it quickly in

45-degree increments, press ⌘-shift as you drag one of the corners.

Masking Dos and Don'ts If you don't want to show an entire photo, you can crop it within iWeb by creating an image mask. Click on the photo, go to Format: Mask, and then adjust the handles at the edges to exclude the parts you don't want.

However, I don't recommend using this feature very often. iWeb still uploads the full image file—even though only a small fraction of it appears on your page. As a result, it can take quite a while for that image to appear in a Web browser. If you want to use only a portion of an image, you're better off cropping it in iPhoto or another image editor before placing it in iWeb.

If you replace a template image with one of your own but discover that only a fraction of your image appears, the problem likely lies in its mask. To reposition the new image in the frame, select it and go to Format: Unmask. You can then either create a new mask or resize the image so it better fits the space.

Add Other Effects Using the Inspector pane's Graphic tab, you can also change the image's opacity, add a drop shadow, or create a reflection. But each of these features will increase the



Movies

You can use the Movies page to showcase the movies you've created with iMovie, or movies from your digital camera. The movies will work in any standard Web browser, including Safari, Mozilla Firefox and Camino, and Internet Explorer. And unlike movies published through HomePage, iWeb's video downloads don't begin playing until the viewer clicks on the Play button.

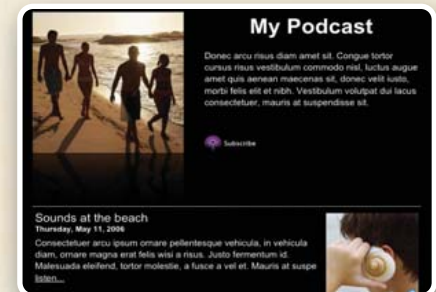


Blog

When you add a Blog page, iWeb actually creates three different pages: the Blog page, which includes a summary of the latest entries you've posted; the Entries page, which lets you add new blog posts or delete old ones; and the Archive page, which gives a very brief summary of every blog entry. With version 1.1, iWeb also lets you enable comments for blog posts, but this requires that you have a .Mac account.

Podcast

When you publish a podcast from GarageBand, this is one of the two places it can end up (you can also publish a podcast to a Blog page). Podcast pages work just like Blog pages, with entry, summary, and archive pages. If you decide to create a podcast, be sure to go to File: Submit Podcast To iTunes so you can get the word out about your podcast.



Make Pages Download Faster

Large graphics, videos, and special effects may look gorgeous on screen, but they come at a cost—namely, long download times. If you have visitors who view your Web site over relatively slow connections (such as dial-up or basic DSL), you can do them a favor by making your site as trim as possible. Here are four easy slimming techniques:

Limit Special Effects Drop shadows and reflections will increase an image's file size—as will rotating a picture. Use these effects very sparingly, if at all.

Avoid Image Masks When you create a mask to crop your photo, a Web browser must still download the entire image. Instead, crop out unwanted parts in an image editor such as iPhoto before importing the photo into iWeb.

Stick with the Default Font iWeb has an annoying tendency to turn styled text into images. This not only increases your page's file size, but also creates other problems in browsers. To play it safe, stick with the fonts Apple supplies for each template.

Compress Video Video files tend to be massive. Before you drag a movie into iWeb, make sure you've compressed it in iMovie HD.



image's file size (and its download time). This is because iWeb publishes these images as PNG files, which tend to be much larger than JPEG files. To keep your download times manageable, use these effects sparingly.

the video files for the Web, open the movies in iMovie HD and choose Share: iWeb. iMovie will compress the video and place it in a new Movie page.

For a podcast you've created in GarageBand (see "Give Your Web Site a Voice" for instructions), open the podcast in GarageBand and select Share: iWeb to import it into a Blog or Podcast page you've already set up on your site.

If you're publishing to .Mac, you can add support for comments to Blog and Podcast pages. Select the main Blog or Podcast page in the Site Organizer, open the RSS tab of the Inspector pane, and enable the Allow Comments option.

Unfortunately, iWeb doesn't support commenting on sites that are published

outside of .Mac. But you can add this feature with the aid of iComment (macworld.com/1378).



Create Links

By now, you should have most of your Web site's contents in place. You don't need to worry about linking the individual pages. iWeb takes care of that for you—unless, of course, you've chosen to leave certain pages off the navigation menu. But if you want to link pages to the outside world, you'll need to add your own links.

In iWeb, you can add a link to an image, to words, or to any other element on your Web page. To add a link, select the text or page item and then open the Link section of the Inspector pane. Click on the check box next to Enable As A Hyperlink, and then use the Link pop-up menu to select the type of link you want (see "Building Connections"). You have four options:

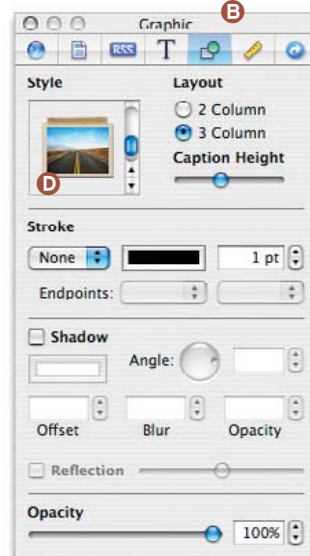
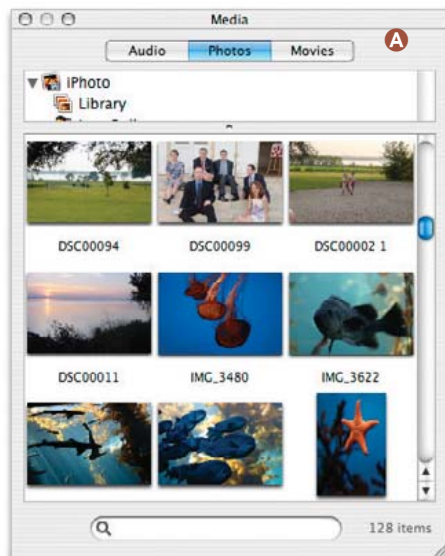
One of My Pages This option lets you link to another page in your iWeb site. It's useful if you want to link to a page that doesn't appear in your main navigation bar.

An External Page This option lets you type in the URL for another Web site. Unfortunately, if someone clicks on one of these links, that page loads in the current browser window rather than in a new window or tab. If you have the time and are familiar with HTML, you can fix this oversight by opening the fin-



Import Movies and Podcasts

To add a video file to your Web page, open the Media Browser and click on the Movies tab. If you have movies stored in another location on your hard drive, drag the folder into the Media Browser pane to add it to the list. Once you've imported a movie file, you can resize it just as you would a photo. If you haven't already optimized



Customize It To add images to your iWeb page, drag them from the Media Browser **A**. To add effects to your photos, use the Inspector pane's Graphic tab **B**. When working on a Photos page, you can select a new photo frame **C** by making a selection in the Style menu **D**.

ished HTML files that iWeb creates and adding the text `target="_blank"` after the URL in any `<a href>` tags. For example:

```
<a href="http://www.example.com"
target="_blank">
```

A File This option lets you create a link that other people can click on to download a selected file, such as a PDF or a Microsoft Word document. The file then gets uploaded to your iWeb site along with the rest of the pages and images.

An E-mail Message This option creates a link that lets someone send you an

e-mail message. You can specify the e-mail address and the message's subject line. Then, using your e-mail application, you can set up a rule that looks for incoming messages with that subject line and filters them to a special folder. But keep in mind that publishing your e-mail address on your Web site may be an invitation to spam.

Tip If you have a URL open in Safari, you can save time simply by dragging it from Safari's address field onto an iWeb page. iWeb adds the Web page's name as text and inserts the appropriate link.



Test Your Site

Before you spend time uploading your site to your .Mac account or to another server, make sure that all of your links work correctly and that everything looks good in the Web browser. Although iWeb doesn't offer an option for testing your site prior to publishing, there is a way around this problem—publish the file to a local folder on your hard drive.

In iWeb, go to File: Publish To A Folder. In the resulting dialog box, click on the New Folder button, type in a name for the folder, and then click on Choose. iWeb cre-

Another Way to Share Photos



iWeb's Photos page makes it easy to share slide shows of your favorite snapshots with others. But what if you'd like to share the actual files—giving friends and family the power to print your photos? If you have a .Mac account and iPhoto 6, you can do all of this by setting up a photocast.

Photocasting lets you broadcast any picture in your iPhoto 6 library simply by dropping it into an album. The pictures are then distributed to other viewers using a syndication technology called RSS. Anyone with an RSS reader, such as the one built into Safari, can then subscribe to your photocast to see your latest pictures. Recipients with iPhoto 6 can even add your photos to their own photo library.

Step 1 You can select any iPhoto album to use as your photocast, or create a new album. Be sure to give your new album a catchy name. This description becomes the title of your RSS feed.

Step 2 Drag images from your iPhoto library into the new album. If you have images in the Raw format, you can add these as well. iPhoto automatically sends out a JPEG version of your Raw file.

Although it's not required, you may want to give each image in your photocast a descriptive name and a caption. This data accompanies your pictures during syndication so your recipients can learn a little bit about their context. To add titles and captions, use the Information pane (if it's not visible, click on the blue *i* in the lower left corner of iPhoto's main window).

Step 3 Once you have your album set up, make sure that your Mac is connected to the Internet and that you've signed into your .Mac account in the .Mac preference pane. In iPhoto, click once on the album you want to broadcast and then go to Share: Photocast. In the resulting dialog box, specify a size for your syndicated photos. This option affects only the photos you send out to others. iPhoto leaves your originals untouched. But keep in mind that larger image sizes will require more time to publish and



Cast Out Your Photos When you select an iPhoto album for photocasting, iPhoto gives you the option to announce your photocast.

download (see "Photocast Image Sizes" for the image size resulting from each choice).

If you choose to send out high-resolution versions of your pictures (a great option for recipients who want to make prints), I recommend password-protecting this feed so you don't make your master files readily available on the Internet. Select the Require Name And Password option and add the password information.

Select the Automatically Update When Album Changes option, and iPhoto will update your syndication feed anytime you add or delete a photo from the album. When you're done, click on the Publish button to make your pictures available to the world via RSS.

Step 4 Once you've published your photocast (this can take a while if it includes high-resolution files), iPhoto gives you the option of sending an e-mail message with instructions to your audience. I recommend adding a few notes of your own. For example, you may suggest a free RSS reader to friends who don't have iPhoto 6 and who don't use Safari—I often recommend Ranchero's NetNewsWire Lite (www.ranchero.com). To make visitors to your Web site aware of your photocast, include the feed URL on your iWeb page. Keep in mind, however, that you can add this feed only to the Blog or Podcast pages. To add a link, go to Insert: Button: Subscribe To Photocast.

If you have new subscribers who didn't receive the first e-mail announcement, you can generate a new one by clicking on your photocast album and then clicking on the URL link in the Information box. iPhoto will give you the option to announce your photocast again.—DERRICK STORY

Photocast Image Sizes

IMAGE SIZE	SMALL	MEDIUM	LARGE	ACTUAL SIZE
Resolution (in pixels)	640 × 480	1,280 × 960	1,920 × 1,440	Determined by camera.
Suggested print size (in inches)	3 × 5	5 × 7	8 × 10	Determined by camera.

Give Your Web Site a Voice

Interested in starting your own talk-radio show? Well, it's never been easier. With the release of iLife '06, Apple turned GarageBand into an all-in-one studio for creating, editing, and posting podcasts.

Recording and Editing Your Podcast

Content aside, the most important component of your podcast is your voice. To start a new voice recording, open GarageBand and choose New Podcast Episode in the dialog box. When the main window opens, select the Male or Female voice track, click on the red Record button, and begin talking into your microphone. When you're done, click on the Record button a second time to stop recording.



Shaddup! Buried within GarageBand's Speech Enhancer effect is a slider for noise reduction.

on the triangle next to Details, and select the pencil icon next to the Speech Enhancer effect. In the resulting window, adjust the Reduce Noise slider while playing back your track (see "Shaddup!"). When you've found the best setting for your recording, close the Speech Enhancer window to apply the effect.

Splitville Inexperienced podcasters are particularly prone to vocal hitches, long pauses, and superfluous "ums"—all of which can make for tedious listening. To eliminate these flubs, use GarageBand's Split command. With your vocal track selected, go to Edit: Split and highlight a part of the track you'd like to trim from the timeline. Drag the selected region by its bottom corner to separate it from the rest of the track and remove it. Then drag the remaining pieces of the track together for a seamless edit. If you like, you can even select each part and choose Edit: Join to assemble the two parts into a single chunk.

Making Tracks

Although your podcast can contain a single voice track, why not create a richer podcast by adding voice tracks, sound effects, and music? These tips will help.

Jingle Jumble Using the included Jingles tracks can be a great way to add a little something extra to your voice recording. But you may not like any of

the jingles included in GarageBand. In that case, you can use your own. Simply drag any digital audio file you like into this track, including unprotected music tracks from your iTunes library and sound effects found in the iLife Sound Effects folder (/Library/Audio/Audio Loops/Apple/iLife Sound Effects).

To make these folders more accessible, locate them in the Finder, open GarageBand's Media Browser (Control: Show Media Browser), click on the Audio tab, and drag the folder full of sounds into the Media Browser. Click on that folder in the Media Browser to see its contents in the Name list.

Nixing Noise To reduce some of the ambient noise in your recording—such as the sound of your Mac's fan or the traffic passing outside your window—use GarageBand's built-in Speech Enhancer effect. Double-click on the voice track you recorded to reveal the Track Enhancer pane. From there, click

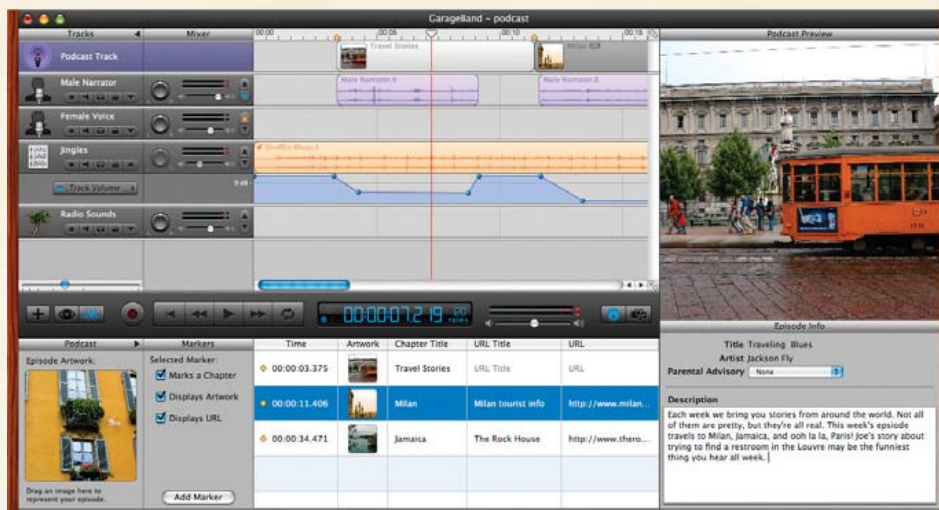
the jingles included in GarageBand. In that case, you can use your own. Simply drag any digital audio file you like into this track, including unprotected music tracks from your iTunes library and sound effects found in the iLife Sound Effects folder (/Library/Audio/Audio Loops/Apple/iLife Sound Effects). To make these folders more accessible, locate them in the Finder, open GarageBand's Media Browser (Control: Show Media Browser), click on the Audio tab, and drag the folder full of sounds into the Media Browser. Click on that folder in the Media Browser to see its contents in the Name list.

Goose the Ducking GarageBand 3 includes a new *ducking* feature that automatically raises and lowers the volume of background tracks when circumstances dictate—for example, when the lead voice drops out. However, some listeners find that GarageBand's ducking lacks subtlety—the backing track comes up too abruptly when the lead voice disappears or takes too long to fade out when the lead voice returns. For more control over this effect, create your own ducks by manually drawing volume curves.

To do so, click on the downward arrow in the background track to reveal its Track Volume control. Click on the blue volume line at the spot where you'd like to begin adjusting the track's volume, and again at the spot where you want the volume curve to end. Then drag this second marker to the desired volume level. Repeat this process at every spot where you'd like to raise or lower the track's volume (see "Quack!").

Play While Recording GarageBand's Radio Sounds track is similar to traditional radio's cart machine—a tape-based device that plays short sound effects, prerecorded segments, and commercials. To trigger the sounds within this track, go to Window: Musical Typing and press keys on your Mac's keyboard. To add these sound effects to your podcast, make sure the Radio Sounds track's small red Record button is turned on. This is a great way to trigger "live" sound effects as you record.

If you don't care for the sounds currently mapped to the virtual keyboard, you can change them by double-clicking on the Radio Sounds entry



Sights and Sounds GarageBand lets you add artwork to your podcasts, so you can create a multimedia presentation. You can even add URLs to photos, to send listeners online.

in the Tracks column and, in the resulting Track Info pane, selecting Sound Effects. Choose a different sound effect—Atom Smasher or Comedy Noises, for example. This maps the collection of sounds to the Musical Typing keyboard. For even more flexibility, drag a Real Instrument (digital audio) track that you like to a key in the Musical Typing keyboard. This action maps that sound to the corresponding key on your Mac's keyboard.

Pretty as a Picture

Adding chapter markers and artwork can make your podcast richer and more easily navigable (see "Sights and Sounds").

Size (and Kind) Matters When creating artwork for your podcast—specifically the episode artwork that will represent your podcast in the iTunes Music Store—use square JPEG or PNG images that are 300 by 300 pixels. To resize GarageBand's episode artwork, double-click on the image to bring up the Artwork Editor window. Drag the image to reposition it within the window. Use the slider at the bottom of the window to zoom in and out.

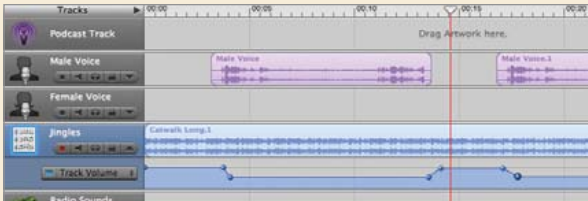
Send 'em Somewhere Your podcast will be even more useful if you add Web links to it. To do so, click on the Podcast Track and drag some artwork from GarageBand's Media Browser into the track where you'd like a link to appear—when you mention a favorite Web site, for example. This will create a new chapter marker. If it's not already visible, press ⌘-E to open the Track Editor pane. Select the chapter you just created and enter a Web address in the chapter's URL field. You may also want to enter the Web site's name in the

URL Title field (otherwise only the Web address will appear on screen during your podcast).

Publish or Perish When you're satisfied with your podcast, you can publish it to your iWeb site by opening the Share menu and selecting Send Podcast To iWeb. Specify where you'd like to publish the podcast. iWeb then imports your podcast into a new entry page with placeholder text for a brief description.

Signing Off

While these tips can help you make a cleaner, more professional-sounding podcast, they can't provide the ingredients integral to today's most successful podcasts—engaging content heaped with a large measure of personality. And that comes only from doing it time and again. Perhaps it's time to get started.—CHRISTOPHER BREEN



Quack! If GarageBand's Ducking feature isn't subtle enough for you, draw ducks of your own.

Learn from the Pros

Ever wonder why professional broadcasts sound so much more polished than the ones you create with your Mac? In addition to years of voice training, these pros also have the benefit of special gear that makes their voices sound as rich and smooth as possible. Here are some of their secrets:

The Mike Makes It Mellifluous as your voice may be, you can do things to improve its quality in recordings. The first is to purchase a decent microphone. The simplest option is a microphone that plugs directly into your Mac's USB port, such as Samson's C01U-USB Studio Condenser Microphone (\$80; macworld.com/1379) or Blue Microphones' Snowball (\$159; macworld.com/1377). The Snowball has an advantage—you can switch it from cardioid, where one side of the microphone picks up audio, to omni, where both sides can record audio. Having an omni mike is useful for live interviews where you and a guest sit facing each other.

For even better results, consider investing in a professional microphone, such as those made by Shure (www.shure.com) or Sennheiser (www.sennheiserusa.com). However, because these mikes don't offer a USB connection, you'll also need a USB audio interface such as M-Audio's MobilePre USB (\$180; macworld.com/1380).



Stop the Pop Regardless of the kind of mike you use, you should add a pop filter to your microphone setup. This nylon mesh screen, which you can usually pick up for around \$20, attaches to a microphone stand and helps cut back on *plosives*—popping consonants such as B and P—by absorbing some of the wind generated by these sounds.



Manage Compression If you compare the sound of your voice to what you'll hear on commercial radio, you may notice how much more even the volume is on the latter. This is due not only to a host's vocal technique but also to the aid of a compressor, an external hardware device or effect plug-in that evens out an audio signal's dynamic range. GarageBand includes a compressor effect, but you can apply it only after you've recorded your track. To give your podcast professional polish and prevent clipping (which creates an ugly distortion sound), you might also consider investing in an external compressor, such as DBX's 166XL Compressor/Limiter/Gate (\$360; www.dbxpro.com/166XL.htm).

ates the folder inside your Sites folder, and then places the files for your finished Web site within it. When it's done, iWeb pops up a dialog box that gives you the option to visit your new Web site. Click on the Visit Site Now button to open your Web pages in Safari. Navigate through your Web site, checking for any broken links. If everything looks OK, you're ready to publish. If not, make the corrections in iWeb before continuing. Once you're satisfied with your Web site, drag this test site to the Trash to free up space on your hard drive.



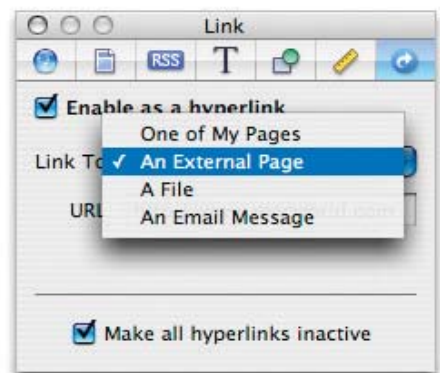
Publish Your Site

iWeb gives you two options for publishing your site: to .Mac (which requires an

annual \$99 membership) or to a folder, which you can then upload to the Web server of your choice.

To .Mac To publish your iWeb site to .Mac, either click on the Publish button in the bottom left corner of iWeb's window, or choose File: Publish To .Mac.

To a Folder If you don't have a .Mac account, you can still use iWeb to create a site. You just need a Web server to which you can upload your files. Many Internet service providers (ISPs)—Comcast, for example—provide Web space as part of their service contract (check with your ISP to find out how much Web space you have and where you upload the files). To publish your site, go to File: Publish To A Folder. When iWeb is done, upload that



Building Connections Use the Link inspector to turn a phrase or an image into a hyperlink.

folder to the correct directory on the Web server. In most cases, you should be able to mount your ISP's network server on your desktop and then just drag the Web folder to your ISP's Web space.

Updating Your Site Once you publish your site, you'll notice that the page icons in iWeb's Site Organizer switch from red to blue. This is iWeb's way of telling you it has published these pages to the Web. If you add a new page or edit a page after publishing, those pages appear in red. This is an easy way to tell which pages have changed and need to be published again as you update and maintain your site.

A Work in Progress

Getting your new Web site up and running should take only a day or two, depending on how ambitious you are with movies and podcasts. But don't rest on your laurels for too long. To keep visitors interested, you'll want to update your site regularly with new content. Once you have the basic structure set up, adding blogs, new photos, and other pages should be easy. □

Relief for Overcrowded Navigation Bars

iWeb's Blog and Podcast pages let you create multiple entries, which then link off a main page. But when it comes to uploading photos, you have to create individual pages for each batch. If you take a lot of photos, you can easily end up with several dozen Photos pages, all clogging up your site's navigation menu.

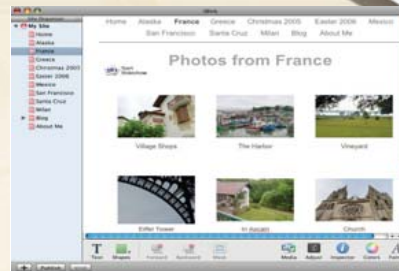
Web designers have long solved this problem by creating submenus—for example, a group of photo pages organized underneath a more general Photos heading. This saves space in the main navigation menu while still giving viewers easy access to all of your individual photos.

Although iWeb doesn't offer an automatic way of creating submenus, you can do it. One of the easiest ways is to hide your individual Photos pages from the navigation menu and then link to them from a single Photos page. Here's how:

Step 1: Hide Your Pages Select the first Photos page in iWeb's Site Organizer, open the Page section of the Inspector pane, and deselect the Include Page In Navigation Menu option. Repeat for each Photos page you want to hide.

Step 2: Create an Index Page Create a new page that will serve as the index page for your different photo collections. (I've found that the Modern theme's About Me page works particularly well for this.) Select the page in the Site Organizer column and rename it Photo Albums. Delete anything on the page that you don't want to keep.

Step 3: Add Image Links Open the Photos section of the Media Browser and locate a



All Together Now Rather than listing every Photos page in the navigation menu (top), we created a main Photos page with links to hidden pages (bottom).

photo that best represents the first Photos page to which you want to link. Drag the image onto your Photo Albums page and resize it appropriately. With the new photo selected, open the Link inspector and select the Enable As A Hyperlink option. In the Link To pop-up menu, select One Of My Pages, and then select the correct Photos page from the Page menu.

Repeat this process for every Photos page to which you want to link.

More Info Online

Want even more iWeb advice? Go to macworld.com/1302 to see our exclusive online content, including tips on the following:

- > How to trick iWeb into publishing from multiple Macs.
- > How to mix iWeb pages with .Mac HomePage sites.
- > How to create interesting frames for your photos with iWeb shapes.

CHUCK TOPOREK (web.mac.com/chuckdude), a senior editor with O'Reilly Media, is the author of *Mac OS X Tiger Pocket Guide* (O'Reilly Media, 2005) and *Inside .Mac* (O'Reilly Media, 2004).

Disk Utility's Hidden Talents

Poor Disk Utility. It seems fated to remain one of Mac OS X's most underappreciated utilities. If you've even launched it at all, chances are you haven't gone beyond using its First Aid features to repair a disk (see "Mac OS X First Aid" at macworld.com/1261). But that merely scratches the surface of what this multitasking tool can do. Here are eight more ways to put Disk Utility to work.

1. Mount and Unmount Volumes

Most of the time, mounting and ejecting external drives and disks just works. But every now and then, a drive will refuse to mount, or you might eject a connected drive (⌘-E) and find yourself puzzled about how to remount it.

This is when Disk Utility (/Applications/Utilities) is handy to have around. Launch it, and you'll see all connected but unmounted drives listed in the column on the left of its window. Select the desired volume and click on the Mount button in the toolbar, and your drive is back in action. Another advantage of Disk Utility is that you can use it to eject particular drive partitions. With the Finder, you must eject either all of a drive's partitions or none of them.

2. Erase a CD-RW/DVD-RW Disc

While write-once CDs and DVDs are the most common types of blank discs, there may be times when you work with rewritable (RW) discs. If so, you'll eventually want to erase the contents of these discs so you can write new data to them. You don't need add-on software to get this job done. Launch Disk Utility, select the disc from the left column, choose the Erase tab, and then click on Erase in the window that appears.

3. Completely Erase a Drive

Whether you're selling your old computer or cleaning out your virtual desk before moving to another job, sometimes you want to erase everything that's on your hard drive. Disk Utility gives you two options.

The quick and easy way is to select a volume, choose the Erase tab, and click on the Erase button. The disk will now *appear* empty, even though your data is actually still there. What's gone is the catalog directory, or the "pointers," to the files. Your Mac now considers the space free and will write over the data as new information is added.

It's not easy to access files erased in this way, but a knowledgeable hacker (or a disk-recovery service) could ferret them out. So if you want to make sure that all existing data is truly gone, click on Security Options instead. In this sheet, Disk Utility gives you a number of erasure options, including Zero Out Data, 7-Pass Erase, and 35-Pass Erase. When you select multiple passes, the drive is erased multiple times to remove all data traces. But be aware that more passes take more time. Unless you work for the CIA, the Zero Out Data option (which is one pass) should be sufficient (see "Gone for Good").

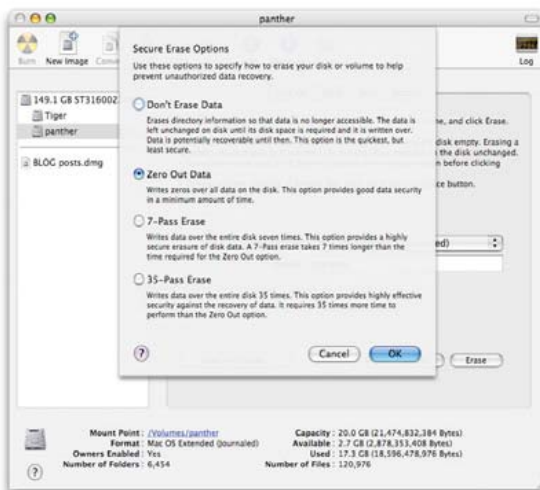
If you're concerned that something sensitive you already deleted might still be recoverable but you don't want to erase the entire drive, never fear. Disk Utility can help in this situation, too. Select the volume, choose the Erase tab, and click on the Erase Free Space button. In the sheet that appears, pick the desired number of erasure passes. Disk Utility targets *only* files that you've deleted, leaving your other files untouched. In the future, you can use the Secure Empty Trash command (Finder: Secure Empty Trash) to thoroughly delete files from the Trash.

4. Partition a Drive

Once upon a time, many of us wondered what to do with our colorful iMacs' whopping 6GB hard drives. But these days, the smallest hard drive you can get with a new iMac is 160GB. With so much space at your disposal, *partitioning*—splitting up a drive into separate parts—can make a lot of sense. For

Gone for Good

When you want to erase a disk and ensure that every scrap of information on it is really gone, use one of these Disk Utility options.





CHECK IT OUT

Prevent Coffee Catastrophes

If coordination is not your strong suit when you first sit down to work in the morning, consider investing in a keyboard *skin*. These thin, molded silicone protectors not only look stylish but also might stop an overturned latte from shorting out your keyboard. zCover even offers one printed with Final Cut Pro shortcuts (pictured). Check out zCover's \$20 to \$50 typeOn skins (www.zcover.com) and iSkin's \$25 ProTouch XT

(www.iskin.com).—SCHOLLE SAWYER McFARLAND



example, perhaps you want to create two bootable volumes—one for daily use and the other for emergencies or for safely testing new software. (For more reasons to partition, see “Multiply Your Drive” at macworld.com/1262.)

Launch Disk Utility, select the drive in the left column, and choose the Partition tab. If you're working with an external drive, click on the Options button and choose the desired option from the Volume Scheme menu. Next, whether you're using an external or an internal drive, select the number of partitions you want and the size of each one, and give each one a name. Click on the Partition button, and the drive will be erased and reformatted.

5. Create a Disk Image

Much of the software you download from the Web, especially from Apple, arrives as a *disk image* (with the telltale file extension *.dmg*). Double-click on a disk image, and its contents appear on your desktop, almost as if you were mounting an external disk.

Using Disk Utility, you can create image files yourself. Doing so allows you to create a single file that contains an exact duplicate of a given folder's contents, down to the position of the icons. If you stick with Disk Utility's default options, the resulting file will also be compressed, so you can save disk space.

To create an image file, launch Disk Utility and select File: New: Disk Image From Folder. In the window that appears, navigate to the desired folder and then click on Image. Give the image file a name, and click on Save when prompted. That's it.

Another useful aspect of disk images is that you can password-protect them. Select AES-128 from the Encryption pop-up menu in the Save dialog box. This is an easy way to protect important documents on your computer.

6. Burn a Bootable Duplicate of a Disc

Worried about your OS X Install DVD getting damaged, or want a copy to take on a trip? You could burn a copy from the Finder, but you wouldn't be able to boot from it when you were done. The simple way to create a *bootable* duplicate is to use Disk Utility to make a disk image and then burn a new disc.

First, launch Disk Utility and mount the CD or DVD. Select the disc from Disk Utility's left column. Then select File: New: Disk Image From *name of disc*. A Save dialog box appears. From the Image Format pop-up menu, select DVD/CD Master. Click on Save. After Disk Utility has created the image file, select Images: Burn. In the dialog box that appears, select the image file and click on Burn. Insert a blank disc when prompted.

7. Create a Multisession Disc

If you take the saying “waste not, want not” to heart, it probably pains you to burn a half-full disc. But did you know that you can record more than once even

to so-called “write-once” CDs and DVDs? You can't erase what's already there, but you can keep adding content to a disc until there's no more free space left. Use Disk Utility to set up the CD or DVD as a *multisession* disc the first time you burn it.

To begin, launch Disk Utility, create an image file of the data you want to burn, and then select Images: Burn. In the dialog box that appears, locate the image file and click on Burn. You are now ready for a crucial step: in the window that appears, select the Leave Disc Appendable option. Click on Burn, and you're done.

To add more data, you must again use Disk Utility; you cannot add data via the Finder's Burn command. You can repeat the appending process until the disc is full. When you mount a disc with multiple sessions, each session will mount as a separate volume.

8. Back Up a Drive

Looking for a free way to back up a drive? Well, you've already got one—Disk Utility's Restore tab. It's a somewhat crude tool, but it does work. Launch Disk Utility and choose the Restore tab. Next, select the volume you want to back up in the left column, and drag it to the Source text field. Select the volume that will hold the copy, and drag it to the Destination text field.

If you want to erase the contents of the destination volume before storing your backup files there, select the Erase Destination option. Otherwise, the newly stored data is simply added to the existing files. Click on Restore to make a copy, and the backup process is complete. If you need to use your backup files later, simply reverse the Source and Destination directions.

As a bonus, Disk Utility lets you use a disk-image file (created separately via Disk Utility's New Disk Image command) instead of an actual physical volume as your source. That's particularly useful if you maintain multiple Macs with a standard preinstalled set of files—in a computer lab, for example. Put your disk image on a portable drive, and then use Disk Utility to restore each Mac to a default state. □

Contributing Editor TED LANDAU is the author of *Ted Landau's Mac OS X Help Line: Tiger Edition* (Peachpit Press, 2006).

Manage a Large iTunes Library

Some Mac users suffer from a serious disease—it's called *libraryitis*. The first symptom is that you have problems finding what you're looking for. Next, you can't fit your iTunes library on your iPod. As the disease worsens, you'll find that even your hard drive seems a size too small. But there is a cure, in the form of proven strategies for corralling all the songs, videos, audiobooks, and podcasts you've collected.

playlist

Want more tips on digital music?

For iPod- and iTunes-related expert advice and breaking news, as well as reviews of all the latest gadgets, check out playlistmag.com.

Sort Smarter

If you've got a lot of music and video files, many probably get lost in the crowd. Luckily, iTunes is a database and is great for sorting files—but it needs your input. One good way to stay organized is to create smart playlists that let you sort your music by genre, artist, year, or custom tags that you add to the Grouping or Comments field of each song.

The Right Tag To get these smart playlists to work well, you need to tag your music correctly. For example, make sure an artist's name is spelled the same way for all of that artist's music, and make sure your genre names are consistent. The databases that provide tags for content from the iTunes Music Store or for CDs that you rip on your own aren't always accurate or consistent, especially when those databases include user-submitted tags.

Change tag information for multiple tracks by selecting the songs and then selecting File: Get Info (or pressing ⌘-I)—the Multiple Song Information window that appears lets you alter any of the tags (except the Name tags) for the selected tracks.

Find with Smarts Once everything is tagged correctly, I suggest adding custom comments or genre information (see “It's Your Tag”). Doing this adds personalized data you can then use as part of a smart playlist that finds specific types of music—

select File: New Smart Playlist, and then adjust the parameters accordingly.

Slim Down Your Collection

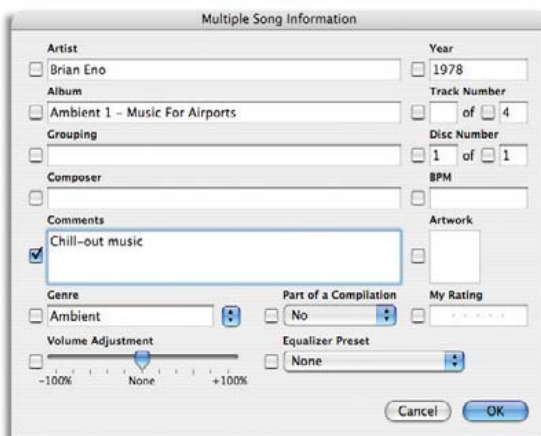
If space is at a premium on your hard drive or your iPod, you'll need more than just a better way to find your files. Figure out what you haven't listened to or watched recently, or don't give much of your time to—then you can decide whether to keep the material around.

A quick way to do so is to sort your music by Last Played or by Play Count. A more permanent approach is to create smart playlists for this purpose. Select File: New Smart Playlist, and create a playlist with this condition: Last Played Is Not In The Last *Number* Months. Try three or six months; you may be surprised at how many songs you haven't listened to recently (see “When Did I Hear That?”). Do the same with Play Count Is Less Than *Number*, and choose a low number to find songs that get very little of your attention.

You could also create a smart playlist for the songs with the lowest ratings, or for specific genres that you might not want to listen to all the time, such as holiday music. You can make similar smart playlists for video files, podcasts, audiobooks, and so on.

Keep or Delete Once you've found files you don't need on your Mac, you'll want to back them up before you delete them. The easiest way to do this is to go to iTunes: Preferences, click on the Advanced icon, and then click on the Burning tab. Make sure Data CD Or DVD is selected, and click on OK. (A data CD contains the actual music files; music CDs have to be ripped and don't hold as many songs.) If you really don't want these songs, videos, and so on, consider getting them off your Mac. After you've refined your smart playlist to include only items you want to back up, select that playlist in iTunes, and click on the Burn Disc button at the top right of the iTunes window to burn the original files to CD or DVD. You can then delete items from within the playlist by selecting them and pressing option-delete. For more backup methods and strategies, go to macworld.com/1256.

It's Your Tag Using the Multiple Song Information window, you can create new genres or add comments to groups of files.





When Did I Hear That? Smart playlists can help you isolate songs you don't listen to much anymore, so you can decide whether to keep them around.

Dump the Dupes Another way to trim some fat is to look for duplicate songs in your library. You may have ripped an album twice, or you may have multiple versions of the same song from different albums. Select **Edit: Show Duplicate Songs**, and iTunes will display all duplicate tracks (those with the same track name and artist name). Not all files will be actual duplicates—for example, look in any Deadhead's library, and you're sure to see a dozen versions of "Dark Star"—but you may find songs you can delete.

iTunes' **Show Duplicate Songs** feature isn't perfect, so you might want to try the free Corral iTunes Dups AppleScript, from Doug Adams (macworld.com/1254), which finds duplicates and puts them in a playlist. You'll then be able to go through that playlist when you have time to decide which songs you want to delete.

Put the Right Stuff on Your iPod

You love your big music library, but even after you've sorted it and trimmed it down, the mightiest iPod still couldn't hold everything. To make sure that you end up with what you want, take control of the process. First connect your iPod, open its preference pane (click on the iPod button at the bottom right of the iTunes window), and make sure the Music tab is the active window. If you want to leave the default auto-sync settings in place, an easy way to whittle down your library is to select **Only Update Checked Songs**. If you do this, any songs you deselect will remain on your Mac but won't be moved to your iPod. Choose multiple files at once by holding down the **⌘** key. Be careful—this deselects *all* currently visible files, so don't do this when viewing your entire library. (iTunes will skip these songs in playlists and in the Party Shuffle list, and if you select an album from the browser and play it.)

Another option is to select either **Automatically Update Selected Playlist Only** or **Manually Manage**

Songs And Playlists. The first lets you pick only the playlists you want to sync; the second requires that you drag files and playlists to the iPod's icon in the Source window. (When you manually update your iPod, Play Count numbers, Last Played dates, and ratings don't get copied from the iPod to your library.) The other tabs—namely, Podcasts, Photos, and

Videos—let you decide what other items are also copied to the iPod.

When One Library Is Not Enough

If you have lots of music or video, or if you have more than one iPod, a single library may not be enough to meet your needs. You may want to split your library into different parts for different users or different moods.

One not-so-simple method is to create a second user account for another library. But there's an even better solution—the \$5 iTunes Library Manager, from Doug Adams (macworld.com/1017), lets you switch between as many libraries as you want, so you can have all the personalities, iPods, or moods you want, and easily manage them from a single account. Check out macworld.com/1255 for more information on syncing several iPods with one Mac. □

KIRK McELHEARN is the author of several books on the Mac and the iPod, including *iPod & iTunes Garage* (Prentice Hall, 2004). His blog, Kirkville (www.mcelhearn.com), features articles about OS X, the iPod, iTunes, and more.

Time to Make a Move

If your library is getting too large to fit on your hard drive, it's probably time to relocate to a different drive. Here's how.

To move your library, first copy your entire iTunes Music folder from your *user folder/Music/iTunes* to the new drive. Then select iTunes: Preferences, select Advanced, and then select the General tab. From here, click on the Change button, navigate to the new location of the iTunes folder, and click on Choose. iTunes will now look for your files in the new location, and it will also put new additions there.

Once you've made sure that iTunes finds all the files, you can delete the originals—don't worry, you won't lose play counts and ratings. I recommend moving only the iTunes Music folder, not the entire iTunes folder; this keeps your iTunes Library files on your Mac, making them easier to back up. Remember, if you've moved everything to an external drive, you'll need to mount it whenever you want to access your files.

Cleaning Your SLR Camera

Thanks to their interchangeable lenses, digital SLR cameras let you jump from telephoto to wide-angle shots in mere seconds. The downside to all this unscrewing is that you can end up with small specks of dust on the sensor—the light-sensitive silicon chip that records incoming light—resulting in some not-so-tiny spots on your pictures.

Though you can usually remove these spots with an image-editing application, a better solution is to remove the dust itself. Most camera manufacturers recommend that you send your digital SLR to a professional for cleaning. In fact, cleaning the sensor yourself may void your camera's warranty. But the service can be expensive. Estimates for cleaning my Nikon D70 ranged from \$30 to \$40. If you get your camera cleaned regularly—a good idea if you often change lenses or shoot in dry, dusty environments—that expense will quickly add up. However, with the right tools and a measure of care, you *can* clean your camera's sensor yourself.

The Warning

Cleaning your camera's sensor involves some risks. If you do it incorrectly, you could irreparably damage the camera. If you're not comfortable with these risks, you should probably stick to having a pro do the job.

Spotting the Spots



Dusty sensors can cause a range of image problems, from dark specks to faint smudges. But they aren't obvious in every photo. To accurately check your camera for errant debris, you'll need to shoot a test image.

Step 1 Some cameras include a Dust Reference Picture setting, which helps reveal sensor dust. If yours doesn't, set your camera at a small aperture such as f16 or f22, switch your lens to manual focus, and then make the image as out of focus as possible.

Step 2 To make dust stand out, take a photo of a bare sky, a blank wall, or any other field of solid color.

Dirty Little Secret Taking a shot against a neutral background will help reveal sensor dust.

Step 3 Transfer the test image to your Mac and open it using your image editor. If your image is too dark to reveal dust, adjust the image's brightness and contrast settings until dust spots appear.—BEN LONG

I've tried to present as complete a picture as possible, but some of these steps may differ on your camera. Before you begin, check your camera's manual or the manufacturer's Web site for more-specific instructions.

What You'll Need

Some companies, such as VisibleDust (www.visible-dust.com) and Photographic Solutions (www.photosol.com), sell tools designed to safely remove dust from a camera's sensor. These typically include lint-free swabs with cleaning solution, bulb blowers, and sensor brushes that fit specific camera types.

To better remove dust that can't easily be blown away, you'll want to give your sensor brush a charge of static electricity. This helps the brush attract the dust and safely lift it off the sensor. One inexpensive way to do this is to spray the brush with compressed air (available from just about any electronics store for less than \$10). But keep in mind that you can't take compressed air on a plane. To work around this problem, VisibleDust offers the \$39 Sensor Brush SD attachment, a tool that quickly spins the brush to build up a charge.

I didn't already have any cleaning supplies, so I picked up VisibleDust's Econo 1.6x Complete cleaning kit (about \$259 at press time; contact the company for pricing), which includes everything necessary for multiple cleanings. Although it's a large investment, it pays for itself after six or seven cleanings. If you don't need the works, you can save money by purchasing items separately. For example, Photographic Solutions' line of cleaning products includes its \$58 Brushoff sensor brush (featuring retractable bristles that neutralize the sensor's natural static-electricity charge to help remove clinging dust), Eclipse lens cleaner (\$8), and sensor swabs (\$48 for a box of 12 swabs).

Step 1: Clean the Chamber

Before you clean your camera's sensor, remove any debris from the surrounding chamber—the area you see when you remove the camera's lens (see "Clean Room"). After all, it won't do much good to clean

the sensor if crud from the chamber then rains down on it. After removing the camera's lens, clean out the inside of the chamber with a foam-tipped swab dipped in a cleaning solution such as VisibleDust's Chamber Clean (for a video tutorial, go to macworld.com/1281).

Step 2: Switch to Cleaning Mode

Almost all SLRs offer a cleaning mode, which moves the mirror aside and locks the shutter so you can access the camera's sensor. On my Nikon D70, I accessed this mode (called Mirror Lock



Clean Room Your sensor isn't the only thing that gets dusty. Be sure to first clean your camera's outer chamber.

Up mode) from the Tools menu. To learn how to enable your camera's cleaning mode, check the camera's manual or go to macworld.com/1282.

You'll also need to make sure your camera has plenty of power. When the power runs out, the mirror will snap closed—and will probably be damaged if you have the tip of a blower or brush inside your camera. If you have an AC adapter for your camera, plug it in. If you don't have an AC adapter, make sure your camera's battery is fully charged and then work as quickly as safety allows—recharging as needed.

Step 3: Blast Away Dust

Once you've exposed the sensor, use a bulb blower to blast away as much of the loose dust as you can. You want a blower with a big bulb that can deliver a good blast. Don't use a blower with an attached brush (the brush can collect dust of its own and scratch the sensor cover). Also, never spray compressed air into your camera. It contains a propellant that may end up on your sensor if you accidentally turn the can upside down.

After a few good blasts from the blower, put the camera back together and take a test shot to look for remaining dust (see "Spotting the Spots"). If dust is still visible, move on to step 4.

Practice Prevention

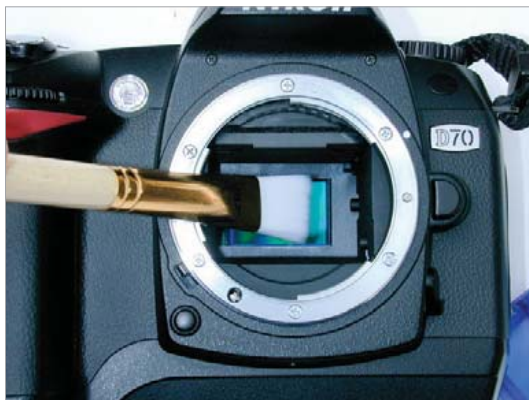
If you're careful, cleaning your SLR's sensor can be safe and relatively easy. But with a little bit of effort, you can prevent your sensor from getting dirty in the first place.

Keep an Eye on Your Environment The environment you're shooting in can have a big impact on your camera. If you're standing on a windy beach or a smoke-filled factory floor, stick with the lens already on your camera, rather than risking a lens change. If you do have to change lenses, try to shelter your camera from the wind with your coat or shirt, and make the change as quickly as possible. If you know you're heading into such an environment, attach your most versatile or most appropriate lens before you go.

Clean Your Lenses Keeping your lenses clean will go a long way toward keeping your images dust-free. Using a bulb blower, routinely clean the lens mounts and the space around the last element of the lens—the one that sits closest to the camera. Then, without touching the sensor, use a bulb blower to clean out the sensor chamber of your camera.—BEN LONG

Step 4: Brush the Sensor

To get at stubborn traces of dust, switch to the sensor brush specified for your camera model (for my D70, I used VisibleDust's Sensor Brush 16). If you have compressed air, use it to spray the bristles for about 10 seconds (don't shake the can, as this may



A Light Dusting

Using a sensor brush with an electrostatic charge, stroke once across the camera's sensor. Clean the brush before making another stroke.

release propellants). If you're using VisibleDust's Sensor Brush SD, attach the brush to the device and spin it several times to charge the brush with static electricity. Switch your camera to its cleaning mode, and wipe the brush once across the sensor (see "A Light Dusting").

Spray the brush with compressed air again or place it back in the spinning device to remove any dust it may have picked up. Repeat the process until you've covered the entire sensor. Take another test shot. If you still see specks, repeat step 3.

Seeing Clearly

With the right tools and a steady hand, you can eliminate annoying dust and keep your images squeaky clean. But be aware of the risks. Only you can decide whether you're willing to risk your camera in the quest for speck-free images. □

Senior Editor CHRISTOPHER BREEN hopes to spend less time cleaning his camera and more time learning how to use the buttons on his Nikon D70.

The IMAP Advantage

Has this ever happened to you? You're on the road or working at home and you need an important e-mail message. The problem is that you downloaded it at the office, and there it sits, inaccessible, on your desktop Mac. If you use standard POP e-mail accounts and more than one Mac, there will probably be times when an e-mail message you need is on the machine you don't have. There is a solution: IMAP.

Most e-mail programs retrieve and keep track of messages in one of two ways—Post Office Protocol (POP) or Internet Message Access Protocol (IMAP). A POP client stores e-mail messages in mailboxes on your Mac and keeps track of which messages you've read, replied to, and so on. At some point, the POP client will delete old messages from the server.

By contrast, if you use an IMAP client and e-mail account, the original messages stay on the server, along with a record of whether you've read, replied to, or forwarded a message.

If you're a mobile user, using IMAP means your inbox looks the same from any computer or any Internet connection. All your incoming, sent, and saved messages are there. You can also switch between e-mail clients, without having to reimport all your messages.

IMAP has its drawbacks. First, your ISP may impose a storage quota, and that space can fill up quickly. (Of course, you can always archive messages on your Mac if you need to.) Second, some e-mail programs (such as Bare Bones Software's Mailsmith) don't support IMAP. Third, IMAP can be painfully slow over a dial-up connection—especially with Apple Mail.

Switch from POP to IMAP

The first step in switching from POP to IMAP is to check to see whether your ISP offers IMAP access to your existing account. If it does, find out the name of its IMAP and SMTP servers, the kind of authentication the servers use, and whether Secure Sockets Layer (SSL) is required. You may also need to get a new user name and password. If your ISP doesn't offer IMAP, you can find a list of providers who do at macworld.com/0324. (Mac accounts include IMAP access.)

Once you've got an IMAP account and all the necessary settings, you'll want to configure your e-mail client to use it. Setting up IMAP in Mail and Entourage is pretty straightforward. For the basics of setting up a new account, see their respective Help files. In Mail, select Mail: Preferences: Accounts and click on the plus sign (+) button. Choose IMAP from the Account Type drop-down menu, and then fill in the rest of the details (the

account description and your user name, e-mail address, and password) as usual.

In Entourage, choose Tools: Accounts to display the Accounts window, click on the New icon, select IMAP from the Account Type pop-up menu, click on OK, and then fill in the rest. If your ISP requires SSL for IMAP, select the Click Here For Advanced Receiving Options button and then select This IMAP Service Requires A Secure Connection (SSL).

Move Your Messages

After you've set up your IMAP account and configured your e-mail client to use it, you can move messages from your POP account (stored locally on your Mac) to the IMAP server.

In Mail, you can simply drag one or more mailboxes from your mailbox list onto the icon representing your IMAP server. Mail copies the mailboxes

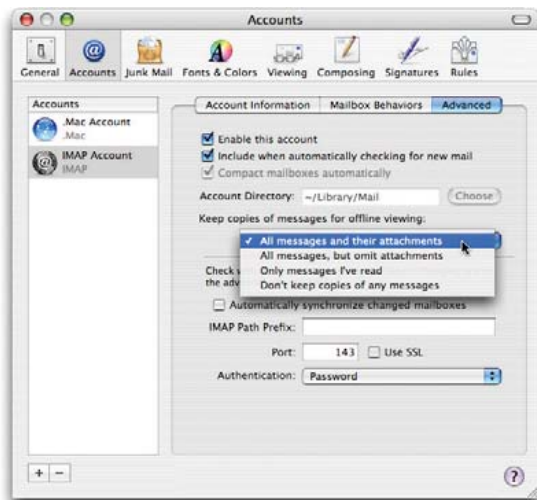


CHECK IT OUT

Bumbakpak Makbakpak Flow

Laptop backpacks are better for your back than traditional one-strap shoulder bags, but they aren't as convenient; with a shoulder bag, you can just swing the bag around to get inside. Bumbakpak's \$85 Makbakpak Flow (www.bumbakpaks.com) offers a unique compromise: It's carried like a backpack, but it hangs low—near your, um, bum—so it's easily accessible. The company also claims that a lower bag lowers your center of gravity, putting less stress on your lower back and shoulders. When you really need a shoulder bag, the Flow's backpack straps convert to a single over-the-shoulder strap. Made of ballistic nylon with a waterproof lining, the Flow accommodates 12-, 15-, and 17-inch laptops, two water bottles, an umbrella (in a special holder), and most of the gadgets you might want to carry.—DAN FRANKS





Cache In Using this pop-up menu, you can choose whether Mail caches all, some, or none of your e-mail messages locally (in addition to keeping copies on the server).

(even nested ones) and their contents to the server, creating new mailboxes as needed.

In Entourage, you must first create a new IMAP mailbox. Select your IMAP account in the Folders list and click on the arrow to the right of the New button and then scroll down to select Folder. Type in a name and click on Create. Once that's done, select all the messages in your local mailbox and drag them to the new IMAP mailbox on the server. Repeat for each of

your mailboxes. When you're done, you can delete your local mailboxes.

IMAP Tips

Now that you've got your IMAP account established, it's time to start learning a few good IMAP habits.

Keep Your Inbox Trim Whether you use rules (or filters) to redirect incoming messages into other mailboxes or sort your messages manually, try to limit the number of messages you store in your inbox; a good target is 40 or fewer. An overloaded inbox can slow down your e-mail client (especially if you use Mail) and make it harder to find messages.

One way to keep your inbox clean is to get into the habit of moving messages into subject-specific mailboxes as soon as you're finished with them. Doing this will also speed up searches.

In addition, you should go through old messages every month or two and delete (or archive) any messages you no longer need to access from other clients or computers.

Watch Out for Special Folders IMAP enables you to store Junk, Drafts, Sent, and Trash mailboxes on the server if you wish. Although online storage can be very handy, it can also make syncing your e-mail client with the server much slower and quickly soak up your storage quota. So think carefully about whether you need to store these mailboxes online. If you do, use them sparingly and empty them frequently.

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If you don't want to store these mailboxes online, you can set up your e-mail client to store them locally. To set this up in Mail, go to Mail: Preferences, select Accounts, and then select the Mailbox Behaviors tab. Deselect any mailbox (Drafts, Sent, Junk, or Trash) you don't want to store on the server—Mail will now store them locally. For mailboxes you want to keep on the server, you can tell Mail when to purge old messages from them (when you quit Mail; when messages are a day, a week, or a month old; or never).

In Entourage, go to Tools: Accounts. Select your IMAP account and then the Advanced tab. Deselect the mailboxes you want to store locally.

Cache Everything Even though IMAP accounts keep your messages on the server, you can cache copies of those messages on your local machine for offline access.

To make sure Mail stores complete, local copies of all your messages, select Preferences: Advanced. Then, under the Keep Copies Of Messages For Offline Viewing pop-up menu, choose All Messages And Their Attachments (see "Cache In").

In Entourage, select Tools: Accounts, double-click on your IMAP account, and then select the Options tab. In the Server Options section, select Always Download Complete Message Bodies and deselect Partially Receive Messages Over *Number* KB.

Stay in Sync One tricky thing about using IMAP from multiple Macs is making sure the messages you store locally on your various machines all match the

copies stored on the server.

Ordinarily, Mail will synchronize server mailboxes with your e-mail client only periodically. To change that, you could select Automatically Synchronize Changed Mailboxes in the Advanced tab of your IMAP account. Unfortunately, doing this can slow down Mail and overtax a slow network connection. Instead, synchronize messages manually (especially before going offline) by choosing Mailbox: Synchronize: *Account Name* (or Mailbox: Synchronize All Accounts).

By default, Entourage synchronizes only the contents of your inbox with the server; it synchronizes other mailboxes when you open them. To synchronize more mailboxes when Entourage checks your IMAP account, choose Tools: Schedules and double-click on the schedule that includes your IMAP account (such as Send And Receive All). Then click on the Click Here For Account Options button next to your IMAP account in the list. Select each mailbox you want to synchronize automatically. Even if you choose Headers Only for a given mailbox, Entourage will download full messages if you chose Always Download Complete Message Bodies in the previous step.

Once you've got IMAP set up on your laptop, you can travel the world knowing that all those messages are sitting safely on the server, accessible from any Mac, at any time you want. □

JOE KISSELL is a senior editor for TidBits (www.tidbits.com) and the author of the e-book *Take Control of Apple Mail in Tiger* (www.takecontrolbooks.com).

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Boot Camp Basic Training

Ready to slap on the fatigues and try out Apple's Boot Camp? If you've got an Intel-based Mac, Mac OS X 10.4.6, the latest firmware for your computer, and—most important—an adventurous spirit, then we've got the answers to your nitty-gritty questions about using your Mac to boot directly into Microsoft Windows XP. To read more about Boot Camp in general, see "Boot Camp FAQs," *Mac Beat*, on page 14.

Does Boot Camp come with a copy of Microsoft Windows XP?

No. You can download a free public beta of Boot Camp from macworld.com/1329, but you'll also need a full version of Microsoft's \$199 Windows XP Service Pack 2 (www.microsoft.com). And yes, we specifically mean Service Pack 2 (SP2). When we tried installing SP1 during one of our tests, it didn't work at all. You can't just copy the version of Windows that came with any old PC, because you can't install it on any system other than the one it came with. You also can't buy a less expensive upgrade copy, because you're not upgrading from a previous version of Windows.

I have an original XP disc. Is there a way to create an SP2 disc with what I have?

Yes. As long as you have access to a Windows PC, you can combine the two, using a process called *slipstreaming*. See macworld.com/1330 for instructions.

How much hard-drive space do I really need to create a new partition, install Windows, and install one XP program?

You could install Windows XP and an application or two in a 5GB partition, but 10GB would be a more realistic figure.

Can I put Boot Camp and Windows on an external hard drive?

Apple says no. Boot Camp is designed to partition your internal boot disk.

What happens if something goes wrong when I install Windows on the partition?

You may very well have to reformat your hard drive and start from scratch—with a fresh Mac OS X installation as well. As Apple notes, Boot Camp is a beta. The company does not recommend that you use it on a machine on which you depend. Regardless, if you're going to try Boot Camp, make sure you back up your computer before you do anything!

Will my keyboard, mouse, and other peripherals work in Windows?

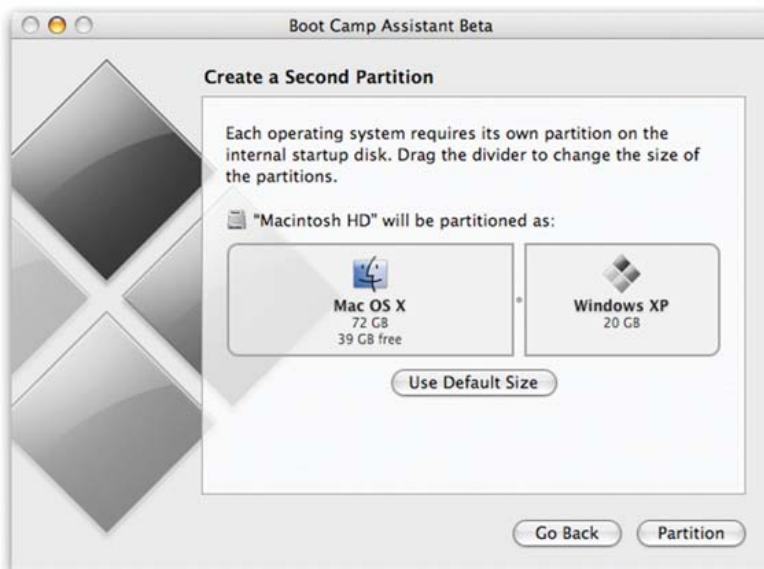
Boot Camp comes with the basic drivers for audio, video, Bluetooth, AirPort, and Ethernet, as well as for the Apple keyboard and mouse. If you have peripherals that require their own XP drivers, you'll have to download and install those yourself from each company's Web site.

How do I select the OS I want to boot my machine in?

When you turn on your machine, hold down the option key to get a drive-picking utility and then select your startup volume from there. Alternatively, if you're on the OS X side, you can use the Startup Disk preference pane, which will display Windows disks alongside Mac OS X volumes. If you're in Windows, you can use the Startup Disk control panel that Boot Camp installs. Once you've selected your startup volume, just restart your computer.

On dual-boot OS 9 and OS X systems, I could hold down the X key on restart to

One Drive, Two Worlds Using Boot Camp, a beta utility from Apple, you can partition your drive and load Windows XP onto one part of it.



boot into OS X. Will that work with the Windows and OS X dual-boot systems?

No—at least this trick didn't work on our test systems.

How do I use Windows key combinations that aren't available on my Mac?

Right-clicking and selecting control-alt-delete can be a bit of a puzzle when you don't have a multiple-button mouse or (in the case of MacBook and MacBook Pro users) a true delete key.

Users of Microsoft's \$219 Virtual PC (🔗; macworld.com/1115) are used to simulating a right-click with a control-click. Unfortunately, this combination doesn't work when you aren't using Mac OS. One simple but finger-twisting workaround is the keyboard combination ⌘-shift-F10, which will bring up the same menu as the traditional right-click. But you have to first click on the folder or object for which you want to evoke the right click, or else you'll just get the default menu. If you value your tendons, try the free Apple Mouse Utility from RH Designs (macworld.com/1331). This small application brings back the control-click combination (in everything but Microsoft Office 2003).

Control-alt-delete—also known as the “three-finger salute”—is the Windows equivalent of the Mac's Force Quit command (⌘-option-escape). If you have a MacBook and hence no true delete key (the Windows OS sees it as a backspace key), OnMac.net recommends the following fix. In Windows, go to Start: Run and enter [remapkey](#) to summon a utility that lets you remap keys on your keyboard. The site suggests mapping the right ⌘ key on your MacBook to serve as the delete key. Save and reboot, and you should be able to press control-alt-right ⌘ whenever you need to force an application to quit or reboot Windows.

How can I pass files between the Mac and Windows partitions?

At times you'll want to grab a file from your other partition without having to reboot. By default, Windows XP can't read HFS-formatted drives, but Mediafour's \$50 MacDrive 6 (www.mediafour.com) opens them for you. That also means you won't have to worry about remembering what operating system you used when you wrote the report you're looking for—you can keep documents in the same place and access them from either operating system. MacDrive has many options, including allowing you to sync an iPod formatted in HFS when you're running Windows XP.

If you want to be able to access files from the Windows partition while you're on the Mac one, take care how you format the Windows volume. If you format it as FAT32, Mac OS X will be able to see the drive and even write files to it. (FAT32 has a couple of limitations, though: the files on it can't be any bigger than 4GB, and your Windows partition must be less

Tunes at Your Fingertips

When Jeremy Kusnetz of Leesburg, Virginia, hit the road, an iPod full of tunes didn't seem like quite enough. He wanted his *entire* iTunes collection—from Beethoven to Pink Floyd—at his fingertips. He also wanted an easy way for his four-year-old daughter to enjoy DVDs on long trips. His high-tech Toyota Prius had a built-in touch screen, so Kusnetz set out to find a way to make car and Mac work together.

The 33-year-old systems architect's first challenge was to connect the video output from his Mac to the Prius's display. (He used a PowerBook G4 initially, but soon realized he could fit an Intel Mac mini into a storage bay under the Prius screen.) To do that, he needed to obtain a professional-grade scan converter, which could convert a VGA signal (the Mac's video output) to an NTSC display (the Prius display). He found one on eBay for about \$40. The next challenge was getting the touch screen to activate Front Row. For this task, he wrote a custom Perl script.

Now Kusnetz can lean over and tap the screen to access his music library or DVDs instead of trying to fiddle with a mouse on the dashboard. (The drivers of Virginia thank him for that!) Download the script, read more about his project, and see a video of the touch screen in action at his Web site (www.kusnetz.net/prius/).—CYRUS FARIVAR



than 32GB.) If you format the volume with the NTFS format, your Mac will be able to see the drive but won't be able to write files to it.

Can I share contact and chat information between the partitions?

Yes. If you store a lot of contacts in Address Book or use iChat throughout the day, you don't have to enter and keep updating all that information in Windows. Instead, try Plaxo (www.plaxo.com), a free online syncing application. On the Mac, Plaxo syncs with Apple's Address Book; on Windows, it syncs with Microsoft Outlook. Plaxo will bring everything over and put it all in the right fields, sparing you the pain of making corrections. And whether you boot into Windows or OS X, your up-to-date contacts will be waiting for you.

Conveniently, Plaxo brings across iChat Buddy names—so you'll see *Bob Smith*, for example, instead of his incomprehensible handle. Plaxo also immediately syncs with all of your contacts who are Plaxo members, so when they make a change to their contact info, Plaxo instantly updates your card. □

This article was written by the editors of *Macworld*.

Mac OS X Hints

The Insiders' Tips You Won't Get from Apple

A Scan-and-Print Tiger Time-Saver

Many new scanners sport a handy Scan And Print button. Push it to scan a document and immediately send it to your default printer. But as long as you're running Mac OS X 10.4, you don't need to chuck out your old scanner to benefit from this time-saver. You can use Tiger's built-in features to build a reasonably automated replacement.

First, launch Printer Setup Utility (/Applications/Utilities). Highlight the printer you'd like to use to print scanned documents, and then select Printers: Create Desktop Printer (⌘-shift-D), to create a Desktop Printer icon. Repeat for any other printers you'd like to have available. When prompted, name each printer and pick where it should be saved. Click on OK.

Place the document you'd like to scan and print on the scanner. Launch Image Capture (/Applications). In the Scan Setup drawer (if you can't see the drawer, click on the Scan Setup toolbar button), click on the pop-up menu next to Automatic Task and then select Other. Navigate to one of the desktop printers you created, select it, and then click on Open. Set your scan area, and start the scan. The document will automatically print when the scan is done.

If you usually don't need to save your scanned documents after printing, choose **tmp** from the Scan To Folder pop-up menu. The scanned document will be saved to the tmp folder, which is erased each time you restart your Mac.

After you complete this setup the first time, you'll find that Image Capture launches with these same settings every time you scan, making it easy to scan and print quickly.

Reply in Mail with Original Open

When I get long, involved e-mail messages, I like to open the original in its own window so I can read it in more depth later on. Then, when I have time, I return to the opened window and click on Reply. The only problem is that when I do so, Apple's Mail takes over the existing message window and turns it into the reply window.

This can be pretty annoying, especially if I was going to copy and paste discrete sections of the original into my reply. (Yes, you can select the text you wish to quote in the message before clicking on Reply to have it automatically included in the reply, but I don't always remember to do that.) The same thing happens when you click on Reply All or Forward—Mail steals the window for your response.

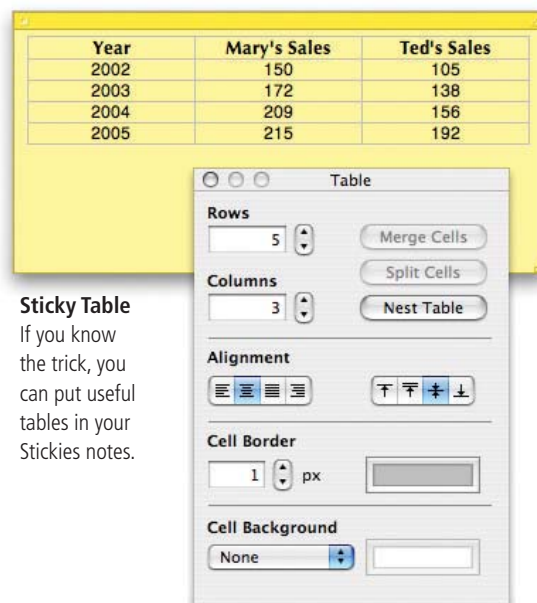
Thankfully, the solution is easy if not obvious. Hold down the option key before clicking on the Reply, Reply All, or Forward button, and Mail will open your reply in a new window, leaving the original message intact.

Use Tables in Stickies

If you're using OS X 10.4, there's no reason to fire up Microsoft Word or Excel when you need to create a simple table. You've got access to a handy built-in table feature in Apple's TextEdit (/Applications). Create a blank TextEdit document in Rich Text mode (Format: Make Rich Text), and then use the Format: Text: Table menu to insert and manage a table.

You may have already known this, but you may not have known that you can also take advantage of these tables in Tiger's Stickies (/Applications).

To put a table in a Stickies note, all you need to do is start the table in TextEdit (or even Word or Excel). Once you have even the most basic structure defined



Sticky Table

If you know the trick, you can put useful tables in your Stickies notes.



WHAT'S ONLINE

> Quickly Lock Your Screen

Don't leave files unprotected when you step away from your Mac.

macworld.com/1248

> Customize the Subject Line of E-mailed iPhotos

Why settle for the standard subject line iPhoto creates when you e-mail photos?

macworld.com/1249

> Customize iPhoto's Photocast Announcements

Modify iPhoto 6's photocast announcement to include viewing information for Windows users.

macworld.com/1250

Uncovering the Alias

If you've ever wished you could be in many places at the same time, then you'll appreciate OS X's useful *aliases*. An alias is basically a small file that points to something else—an application, a folder, or a file. (It's similar, but not identical, to a Windows *shortcut*.) Double-clicking on an alias does the same thing as double-clicking on the original item—folders and documents open, and applications launch. Use aliases to get easy access to files and applications while keeping the originals in one place.

To create an alias, simply select the file you'd like it to point to (the source file), and select File: Make Alias (⌘-L). You can also create an alias by holding the ⌘ and option keys while dragging a file to a new location—you'll see a small arrow in the corner of the icon while you're dragging it, which indicates that you'll create a new alias when you release the mouse.

You know something is an alias when you see a small arrow at the bottom left of the file's icon. If you no longer need the alias, delete it. The original file or folder won't be harmed, because the alias is just a pointer to the original. Here are a few interesting ways to use aliases:

Work the Dock Put a folder of aliases to often-used applications or documents in your Dock. Control-click on that folder, and you'll have a pop-up menu of fast-access items. You can even put aliases to other folders in there, and navigate into those folders, all via the pop-up menu.

Keep Track of Current Projects Do you save current projects on the desktop and then file them away inside your Documents folder when you're done? Instead, keep everything in your Documents folder and put aliases to current projects on your desktop. This is a particularly good idea

if your backup strategy involves backing up your Documents folder and not your whole computer.

Collect Launch-Together Applications Say you typically work with certain applications at the same time—for instance, the Camino Web Project's free browser, Camino (www.caminobrowser.org); Panic's \$30 FTP application, Transmit (www.panic.com); and Bare Bones Software's \$200 HTML editor, BBEdit (www.barebones.com). Make a new folder containing aliases to these three applications. Now you can open the folder, select all the aliases, and then press ⌘-O to launch all three programs at once.

Gather Files in One Location Say you've been creating artwork for multiple clients and multiple projects, and storing each file in its own project-related folder. Now you'd like to be able to open any of these items quickly, without having to navigate to each project-related folder.

Create a new folder, name it, hold down the ⌘ and option keys, and then drag each file you'd like access to into this folder. From now on, you can just open this folder and have quick access to any artwork by double-clicking on one of the aliases.

Access Files on Remote Servers If you often access files stored on servers, try this trick. The next time you connect, create a folder of aliases to the files or folders you access on that server. Disconnect from the server. Now when you need to access the server, just double-click on one of the aliases. If you've stored connection information in your Keychain, the server should automatically mount. (This may not work with all servers, but it definitely works with Personal File Sharing.)



(select Format: Text: Table in TextEdit), select the table in TextEdit, copy it (⌘-C), and then paste it into a new Stickies note.

This may not seem very useful, because there's still no menu item that you can use to control the table's rows, columns, and formatting. However, position your mouse anywhere over the table, control-click, and notice the first item in the contextual menu—Table. Select it, and a palette will appear with the same table options TextEdit offers (see "Sticky Table").

If you find this useful, here's a time-saving trick. Create a new note, paste in a table from TextEdit, and then edit it to have one row and one column. In the one cell, type `Table Template` and then collapse the note by double-clicking on its title bar. When you do, you'll have a tiny one-line placeholder note. The next time you need a new table in a Stickies note, double-click on the collapsed window, copy the table, paste it into a new note, and edit it as needed.

Make Free iPhoto 6 Books

The books you can make with Apple's iPhoto 6 (part of iLife '06, \$79; www.apple.com) are beautiful, but they can be pricey. If you go crazy experimenting with new themes and ordering your masterpieces at \$30 a pop (and that's just for the default ten double-sided pages), you may soon find yourself lacking money for food, clothing, and other niceties. What to do? How about

creating a free, virtual book that you can post online, e-mail to friends, or burn to a CD or DVD?

First, create your book as you normally would—select your images, click on the Book button, and choose the book's theme. Organize the photos on the pages, create your text, and so on. When you're at the point where you'd normally click on the Buy Book button, click on Play instead. A dialog box in which you can specify some settings and music for your slide show will appear. Since you're trying to emulate a printed book, use the Page Flip transition, and specify how long you'd like each page to appear. If you like, visit the Music tab and attach a song to your book. (Obligatory warning: If you're sharing the book with the general public, make sure you've got the rights to use the music.)

Once you've got everything set up, either click on Play to see your slide show or click on Save Settings to return to iPhoto's Book Layout view. You don't have to view the on-screen version before the next step, but doing so to make sure it works properly is worthwhile.

The last step is to convert your slide show into a QuickTime movie. But how? The File: Export menu item is grayed out. Thankfully, the Share: Send To iDVD menu is not. Select this menu item, and iPhoto will convert your slide show for use in iDVD. Your project will be reduced to DV resolution (720 by 540 pixels), but that's still large enough for an on-screen



Have a hint? Go to the Mac OS X Hints Web site (www.macosxhints.com) to share it. This column was based on tips from Jake Behrens, Rio Capella, Mark Pressman, and anonymous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.

movie. After a few minutes (the time will vary based on the size of the book and the speed of your Mac), iDVD will launch. Quit it, and click on Don't Save when warned that you have unsaved changes in the project—you don't need to use iDVD for this to work.

Switch back to the Finder and navigate to *your user folder*/Movies. In this folder, you'll find a new QuickTime movie with the name you gave your book. (If you didn't name the book, the file will be called

Untitled Book.) Double-click on the movie, and you can now watch your "book" in QuickTime Player (see "A Moving Book," and watch an example movie at www.macworld.com/1244).

Speed through the Calendar Widget

When Apple released the OS X

10.4.4 update, one of the things it included was a new Calendar widget. At first, I didn't think much of it, but it turns out that the Calendar widget is perfect for figuring out those seemingly never-ending date questions I encounter every day: What day of the month is next Wednesday? What day of the week will my anniversary fall on next year? I used to answer these questions by switching to iCal, but I've found the Calendar widget a much quicker way to get the same information.



A Moving Book

Create a free QuickTime version of your iPhone book by exporting from iPhone to iDVD. Have a Web site or a .Mac account? Upload your movie book, and let your friends watch, too.



Simple Calendar It may not look like there are many ways to navigate the Calendar widget. But thanks to keyboard shortcuts, it's much easier than it appears.

The Calendar widget doesn't seem very efficient (see "Simple Calendar"). After you make the month view visible (click on the large day-of-the-month display), it seems as though you need to click on the arrow buttons on each side of the month's name to navigate forward or backward in time. But you don't.

The Help files offer one good shortcut—to jump back to the current month, click on the currently displayed month's name. But here's the real secret: you don't even need to use the mouse. To move forward and backward a month at a time, use the right- and left-arrow keys. Jump forward and backward a year at a time with the down- and up-arrow keys. After you're done zooming through the fabric of space-time, press the home key to jump back to the current month. (If you're working on a laptop that lacks a home key, use fn-left arrow, which is that key's equivalent.) □

Senior Editor ROB GRIFFITHS is the author of *Mac OS X Power Hound*, *Panther Edition* (O'Reilly Media, 2004), and runs the Mac OS X Hints Web site (www.macintoshhints.com).



POWER TIP OF THE MONTH

Open Screenshots Immediately

Screenshots often come in handy—for instance, when you need a quick snapshot of something you're working on or when you want to send a picture of an error message to the IT department. OS X includes some good built-in tools for taking screenshots—⌘-shift-3 will take a picture of the whole screen, and ⌘-shift-4 will let you select a region to capture (or then press the spacebar to take a picture of a window).

But by using these tools, you often do the screenshot two-step. First you take the picture. Then you switch to the Finder, hunt for the saved file on your desktop, and open it to make sure you captured what you intended. With a little help from Unix and AppleScript, you can automate this process (as long as you're running OS X 10.3 or 10.4). An AppleScript will activate a Unix script that captures the screenshot, gives it a unique name, and then opens it in Preview.

Open Script Editor (/Applications/AppleScript), and enter the following code, which is available at macworld.com/1245:

```
do shell script "DATE=`date '+%Y%d%m-%H%M%S'`;
FILE=~/.Pictures/screenshot-`${DATE}`.png;
screencapture -i -W -x $FILE;
```

```
if [ -e $FILE ];
then open /Applications/Preview.app $FILE;
fi"
```

When you've entered the script, select File: Save As, give the script a name, set the File Format pop-up menu to Application, and save the script to a convenient location. One good spot is the *your user folder*/Library/Scripts folder—from here it will be easily accessible in the Script menu. (Create this folder if you don't have it already.) If you haven't turned on the Script menu, go to the /Applications/AppleScript folder. If you're running OS X 10.3, double-click on the Install Script Menu program, and you're done. If you're using OS X 10.4, launch AppleScript Utility. Choose the Show Script Menu In The Menu Bar option and (if you want to have access to some useful scripts) the Show Library Scripts option. Quit the program. The Script icon will appear in the menu bar.

Once you've saved your screenshot script, using it is simply a matter of activating it. If you saved it to the *your user folder*/Library/Scripts folder, choose it from the Script menu. You'll see the camera icon on screen; press the spacebar when the icon is over the window you'd like to capture. After a brief delay, the image you captured will open in Preview.

Mac 911

Solutions to Your Most Vexing Mac Problems

Perplexing Permissions

Disk Utility will not repair permissions on my iMac running OS X 10.3.9. When I try, it begins but soon stops, displaying the message "Disk Utility has lost its connection with the disk management tool and cannot continue. Please restart OS X." Restarting the computer doesn't help. I even rebuilt the hard disk with Disk Warrior. That also didn't help.

Joe Feil

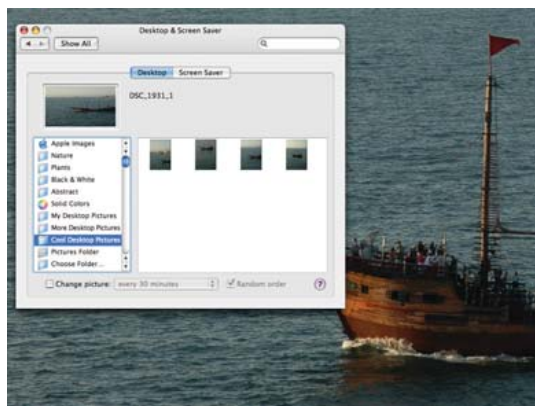
I include your question, Joe, not only because it's a conundrum not easily solved through deduction, but also because it points out the value of Apple's Discussions Forum (discussions.apple.com/index.jspa). That's where I found the solution, offered by one "MacFool."

It seems that when you throw together upgrades that include OS X 10.3.9, QuickTime 7.0.4, and iTunes 6.0.2, and then launch Disk Utility and run First Aid, you encounter the error you describe. It's caused by receipts left over from previous iTunes updates.

To return Disk Utility to normalcy, quit iTunes, move it from the Applications folder to the desktop, travel to /Library/Receipts, trash the receipts for every iTunes entry *except* iTunesX.pkg and iTunesPhoneDriver.pkg, and put iTunes back in the Applications folder. When you run First Aid from within Disk Utility, repairing permissions should work as advertised.

The Changing Picture

I like to use pictures I've taken as my desktop background. But I recently upgraded to iLife '06, and now I can't get my



Desktop Options By hacking the hard-to-find Collections.plist file, you can add more folders to Apple's Desktop picture offerings.

desktop pictures to change automatically. Before I upgraded, I just went to the Desktop & Screen Saver preference pane and enabled the Change Picture Every X Minutes option. Now that option is dimmed. What am I missing?

Paul Touranjoe

As originally explained by Rob Griffiths in his November *Mac OS X Hints* column (macworld.com/1185), you can do this in iPhoto 6 by selecting the images you want to display and clicking on the Desktop button. When you do, the Desktop & Screen Saver preference pane opens with the iPhoto Selection folder highlighted and the Change Picture option enabled and ready to serve.

If you're saying "What Desktop button? I can't see it anywhere!" you've discovered a quirk in iPhoto 6. For some people (me, for example), this button is missing after they install iPhoto 6; for others (Rob Griffiths, for example) it's there. If you don't see it, go to iPhoto's View menu and choose Show In Toolbar Desktop, and all will be right.

That's one way to add a new folder to the source list in the Desktop & Screen Saver preference pane. But what if you'd like to add more than one folder to the source list? If you're willing to do a little hacking, you can.

Start by moving the folders that you want to appear in the source list into the /Library/Desktop Pictures folder. Give those folders distinct, single-word names such as Winter, Vacation, and Wow.

Next, go to /System/Library/PreferencePanes, hold down the option key, and drag the Desktop-



TIP OF THE MONTH

Mobile Mail

In his article "Beat E-mail Hassles" (April 2006), Tom Negrino wrote about several alternative ways to send and receive e-mail from the road. I would like to add my two cents to Tom's advice by mentioning mail2web.com. I've been using mail2web.com for many years now and I find it indispensable when I travel, when I'm at work, and when I want to check my personal mail.

The best part of mail2web.com is that the service is free! I don't have to sign up, I just go to the site (where I have the option to log in over a secure connection), enter my e-mail address with my POP password, and my mail appears within a browser window. Messages aren't removed from the mail server unless I choose to delete them. I can reply to my messages, create new messages, and even add and download attachments.

Ross Abraham

ScreenEffectsPref.prefPane file to the desktop to make a copy. This is so you have a backup copy that you can use to replace the hacked original if something goes wrong.

Now control-click on the original Desktop-ScreenEffectsPref.prefPane file and choose Show Package Contents from the contextual menu. Navigate to /Contents/Resources and control-click on DesktopPictures.prefPane. Once again, choose Show Package Contents.

Go to /Contents/Resources and locate the Collections.plist file. Option-drag this file to the desktop to copy it, open it with TextEdit, and then find and select this text:

```
{
  identifier = solidColors;
  path = "/Library/Desktop Pictures/Solid
Colors";
  showScalingPopUp = NO;
},
```

Copy the text you've selected; then paste the copy just below the end of the original text (just after },). Now edit that copy as follows:

```
{
  identifier = Winter;
  path = "/Library/Desktop Pictures/Winter";
  showScalingPopUp = NO;
},
```

Replace the word *Winter* in this example with the exact name of the first of the picture folders you created in /Library/Desktop Pictures. Make another copy of that text for each folder you added to /Desktop Pictures and edit as necessary.

When you're finished, save the copy of Collections.plist you've just edited, and drag it into the open Resources folder from which it originally came. Your Mac will tell you that you need to authenticate overwriting the original file. Do so by entering your administrator password when prompted. Go to the Desktop & Screen Saver preference pane, and do a little jig when you find that the folders you added now appear in the source list.

iDisk Impasse

I'm bogged down trying to publish my first ever Web site for my user group, using iWeb. I just bought a .Mac account for the group, but I don't know how to manage two different accounts and iDisks from one computer.

Madeleine Landis

It's possible to access two different .Mac accounts from one computer by mucking about in the .Mac preference pane. Simply enter the appropriate .Mac member name and password in the corresponding fields in the Account tab of the .Mac preference pane, and forge ahead with that account.

But I recommend another way. Create two user accounts—one for each .Mac account. That way,



instead of having to type new login details every time you want to switch .Mac accounts, you can use Mac OS X's Fast User Switching to simply switch to the second *user* account and its default .Mac settings.

To do so, open the Accounts preference pane, click on the lock icon, and enter your administrator password when asked. Click on the plus-sign (+) button at the bottom of the window, and then enter a new user name, a short name for this user, and a password. Select the Allow User To Administer This Computer option, and click on Create Account. Click on the Login Options entry. In the resulting window, select the Enable Fast User Switching option.

Switch to this account and open the .Mac preference pane, and you'll discover that the .Mac Member Name and Password fields are blissfully empty. Enter your second .Mac identity here and do all your iWeb work for this identity within this user account.

When you wish to work with your original .Mac account, simply switch to that user account.

Even if you don't want to maintain two different .Mac accounts, there's another great reason for creating a second user account: troubleshooting. If something goes wrong with your primary user account, you can just boot into the secondary one. If whatever problem you had with the first account doesn't appear in the second, you'll know the problem is not with the entire computer but with a user-specific setting.

Change Multiple iMovie Clips

I'm putting together a slide show that contains around 400 images in iMovie (I prefer to use iMovie rather than iPhoto because it includes effects not found in iPhoto). On my first attempt, iMovie refused to apply some of the effects. I've resolved to start over but I would like to know some shortcuts for applying those effects. Do you have any?

From the Macworld.com forums

In iMovie 6, you can save yourself a lot of extra work by applying the same effect or transition to

Photos in iMovie

By opening photos in iMovie, you can easily apply effects to multiple shots.



Send your tips to mac911@macworld.com. If we publish yours, you'll receive this dandy mug. All published submissions become the sole property of Macworld.



TOOLS OF THE TRADE

The Automatic Mac

I'm not proud to admit it, but I'm lazy at heart. Because of this, I want my Mac to take care of a fair measure of my morning's busywork without me doing anything. And because I'm lazy, I don't want to bother with AppleScripts or Automator actions. Here's how I made my Mac start my work day for me, using nothing but the tools that came with OS X and some of my favorite apps.

Energy Saver Preference Pane I configured my Mac to boot at 7:00 every morning by using the Energy Saver preference pane. I clicked on the Options tab, selected Schedule, and set the Start Up Or Wake option to read Every Day At 7:00 a.m. I also enabled the Shut Down option, and told my Mac to shut itself off at midnight each day.

Accounts Preference Pane In the Accounts preference pane, I selected Login Items and added Microsoft Entourage, Mozilla Firefox, and iCal to the list of applications that automatically launch at startup.

Entourage To have my mail waiting for me when I hunker down at the keyboard, I went to Entourage's Tools: Schedules, enabled the Send & Receive All schedule, and created a repeating schedule that checks for mail every five minutes.

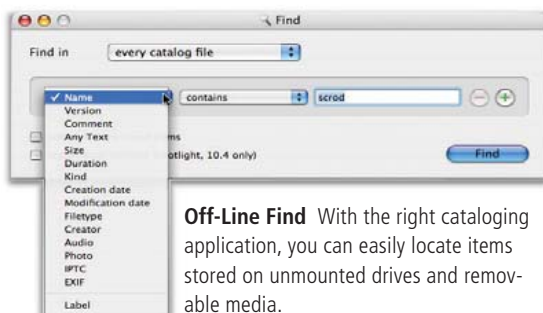
Firefox This popular browser allows you to make an entire folder full of bookmarks your home page, so I designated all of the pages I wanted to see first thing in the morning. Now, when Firefox launches each day, all the pages I want to read are open in separate tabs.

iCal When Apple's calendar application launches, it shows the current day and the view it was using when it was last shut down. So when I shut down iCal at the end of the day, I make sure it's showing the Week view. When it launches in the morning, I can see at a glance what my day and week look like.

Backup I use Apple's Backup to back up my Home folder every morning. Fortunately, it has its own scheduling feature so I don't have to add it to my list of login items. I simply created a new plan (File: New Plan), chose Home Folder from the Choose A Plan template, selected Choose Plan, double-clicked on the correct plan in the Destination And Schedule pane, chose my 500GB FireWire drive, and told Backup I wanted the backup to begin each day at 7:15 a.m.



multiple clips. Just select all the clips you want to change, and then make your changes. For example, to apply a new transition, select the Editing button, click on the Transitions tab, choose the transition you want, and click on the Add button. The transition will be applied to the selected clips. If you want to be really lazy about it, select all the clips in the timeline and apply a single transition to the entire slide show. (This also works in earlier versions of iMovie, but in these versions you access transitions by clicking on the Trans button.)



Off-Line Find With the right cataloging application, you can easily locate items stored on unmounted drives and removable media.

You can use the same approach to apply the same video effect—Black And White, for example—to multiple clips. (You will need to do this before you add any transitions. If transitions are in place, the video effect will be applied only to the first selected clip.)

In addition, you can change the duration of multiple slides. Select all the slides in the timeline, click on the Media button, and then select the Photos tab. Click on the Show Photo Settings button. In the Time field of the Photo Settings window that appears, enter the amount of time you want each slide to be displayed (the Time field is the one next to the slider bar with the tortoise and hare icons), and select Update. All the selected slides will be adjusted to that length (see “Photos in iMovie”).

You can also use this window when you import your stills. Just choose a single image file in the Media window, type a time in the Time field, and select Apply. All future image imports will use this time setting until you change it.

And no, you don't have to apply the Ken Burns effect to the slides; just remove the check mark from that box if you want to go without that effect.

Creating Catalogs

Over the years, I have acquired a number of external FireWire hard drives that I use for archiving past projects. I usually keep them disconnected from the computer, but I would still like to be able to search their directories so I could keep track of the information on each drive. Is there a program that can create a directory file of an external drive and save it locally on my computer?

Ryan Shore

What you're describing is a *cataloging* application. These applications can create a local directory that lists all the files on a hard drive or on removable media. They can also include other data—comments, path names, and, in some instances, the dates files were created and modified, the file types, the file sizes, and more.

Once you've created a catalog, you're free to unmount the drive or disc. When you later want to locate a file on one of these unmounted volumes, simply fire up the catalog app, activate its search feature, and search the catalog for the files you want.

At the risk of intruding on Dan Frakes's *Mac Gems* territory, I'll mention Norbert Doerner's CDFinder (\$30; www.cdfinder.de) and Portents' DiskTracker (\$30; www.portents.com) as two of my favorite cataloging apps (see “Off-Line Find”). Each creates catalogs in fairly short order and allows you to search by various criteria. □

Senior Editor CHRISTOPHER BREEN is the author of *Secrets of the iPod and iTunes*, fifth edition, and *The iPod and iTunes Pocket Guide* (both Peachpit Press, 2005).

Hot Stuff

Our Favorite
New Stuff

FROM THE EDITORS OF MACWORLD



iPod Hi-Fi Speaker Case

The Apple iPod Hi-Fi (🔗; macworld.com/1215) is cool, but its scratchable glossy surfaces and snaggable mesh-fabric grill hinder the system's portability. WaterField Designs' \$149 iPod Hi-Fi Speaker Case covers your Hi-Fi in padded, ballistic nylon—a hard plastic plate further shields the Hi-Fi's speakers—and provides a number of convenient pockets for storing your iPod gear. Best of all, thanks to the foldaway front and top flaps and the cable openings, you can listen to your iPod without removing it from the Hi-Fi Speaker Case (www.sfbags.com).—DAN FRAKES

Writeboard

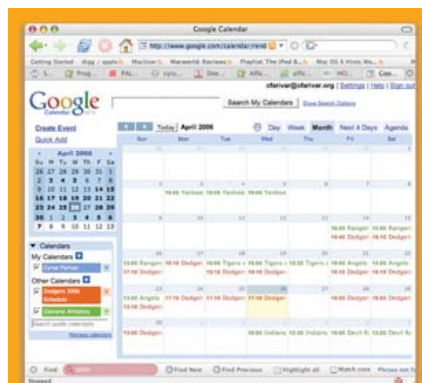
Usually, my work consists of trading story drafts back and forth with writers via e-mail. But recently a writer introduced me to a new way to collaboratively write and edit: Writeboard. It's a free Web site where you can create a new document and then invite people via e-mail to work

on it with you. Collaborators can edit or comment on your text, and Writeboard keeps track of the successive versions, so you can always see who's made which changes or compare one version with another. You get basic formatting tools (for boldface, italic, and indented text). You can

also subscribe to a writeboard via an RSS feed, so when someone saves a new version, you'll be notified (www.writeboard.com).—DAN MILLER

Zfone

As someone who uses Voice over IP (VoIP), I sometimes wonder how easy it is for hackers to listen in on my Internet phone conversations. So I was happy to hear about new encryption software made just for VoIP users. The free public beta of Zfone—created by Philip Zimmermann, the mind behind e-mail-encryption program PGP—runs on OS X and Linux computers and uses a new open protocol to scramble VoIP calls. It works with VoIP software that uses the industry-standard Session Initiation Protocol (SIP), such as Gizmo or X-Lite—sorry, Skype isn't supported (macworld.com/1361).—SCHOLLE SAWYER MCFARLAND



Google Calendar

Over the years, Google has become much more than just a search engine. And one of my favorite offshoots is Google Calendar. This online calendar lets you view and add events from any Internet-connected computer—perfect when you're on the road. Perhaps the best feature for Mac users is the ability to add a Google Calendar to iCal. After a few simple steps, you can subscribe to an XML or iCal feed of your Google Calendar, gaining the convenience of an Internet calendar, as well as the interface and features of iCal (calendar.google.com).—CYRUS FARIVAR

WHAT'S HOT

Brought to you by John Moltz of the Crazy Apple Rumors Site (www.crazyapplerumors.com)

- 1 Steve Jobs announces plans to build a second Apple campus in Cupertino. An ecstatic City Council is torn, however, over Jobs's proposal to rename the city "Jobstania."
- 2 Apple releases the 17-inch MacBook Pro. Huh. I guess that means they're really sticking with the whole "MacBook Pro" thing.
- 3 Burst.com, a maker of audio- and video-delivery technologies, sues Apple for patent infringement. Even more troublesome for Apple, Burst.com also claims to hold a patent on wearing jeans with a black turtleneck.
- 4 Apple releases Boot Camp beta software for running Windows on Intel-based Macs. Confused hackers immediately set about altering the software to remove the ability to run Windows on Intel-based Macs.

COINSTAR GIFT CARDS

I keep a bagful of coins on my dresser, so I was excited to discover that I can exchange my loose change for credit at the iTunes Music Store by using a Coinstar machine. What makes this deal even better is that for each penny, nickel, dime, and quarter I drop in the machine, I receive full credit—there's no service fee, like the 8.9 percent I pay when trading up to bills. Not all Coinstar machines offer this option, so be sure to check out the advanced-machine locator on the Coinstar Web site (www.coinstar.com).—JONATHAN SEFF

